MINISTRY OF FINANCE OF THE REPUBLIC OF INDONESIA
FINANCIAL EDUCATION AND TRAINING AGENCY
CUSTOMS AND EXCISE EDUCATION AND TRAINING CENTER

PROCEEDINGS
SEMINAR OF ACADEMIC RESEARCH CUSTOMS AND EXCISE EDUCATION AND TRAINING CENTER

2022

PREFACE

Praise and gratitude we offer to the presence of Allah SWT because of His grace and guidance, the activity of preparing academic study proceedings in 2022 has been successfully carried out. The preparation of the Academic Study Results Seminar Proceedings for the 2022 Academic Year has gone through long stages starting from submitting a proposal at the beginning of the year, to the mentoring process, and to holding the Academic Study Results Seminar virtually on November 25, 28, and December 12, 2022.

The Customs and Excise Education and Training Center as an educational institution is encouraged to be able to produce human resources who are trustworthy, professional, have high integrity and are responsible. To support the implementation of the Ministry of Finance Corporate University, the Customs and Excise Education and Training Center implements competency-based training programs, knowledge capture, and activities in the field of state finance, especially those related to customs and excise.

In accordance with this, the Customs and Excise Education and Training Center organizes activities to prepare Academic Studies as a means of continuous learning for widyaiswara, learning technology developers and structural officials within the Customs and Excise Education and Training Center.

On this occasion, we also appreciate the researchers who have successfully completed academic studies, supervisors and assessors as well as the committee and all parties who have helped complete the stages of academic studies so that this proceeding can be printed.

We hope that this proceeding can make a major contribution to the policy formulation process at the Directorate General of Customs and Excise and the Financial Education and Training Agency as well as knowledge in the financial sector.

Jakarta, 29 December 2022
Head of Center,

Electronically signed
OentartoWibowo

Seminar on Results of Academic Study

Analysis of the Application and Utilization of KITE IKM Facilities for the purpose of Supporting Export-Oriented Businesses

Friday, November 25, 2022

Pengkaji I

Ribut Sugianto
Widyaiswara Pusdiklat Bea dan Cukai

Pengkaji II

Hanik Rustiningsih
Widyaiswara Pusdiklat Bea dan Cukai

Opening Speech

Bambang Juli Istanto
Plt. Kepala Pusdiklat Bea dan Cukai

Moderator

Mohamad Jafar
Widyaiswara Pusdiklat Bea dan Cukai

MC

Arief Chahyah Pramudhika
Pelaksana Pusdiklat Bea dan Cukai

Penilai Metodologi

Prof. Usep Suhud, M.Si., Ph.D
Dosen Universitas Negeri Jakarta

Penilai Substansi

Dorothea Sigit
Kepala Subdirektorat Fasilitas Impor Tujuan Ekspor Direktorat Jenderal Bea dan Cukai

Penilai Substansi

Kusuma Santi
Kepala Kantor Wilayah Direktorat Jenderal Bea dan Cukai Kalimantan Bagian Timur Direktorat Jenderal Bea dan Cukai

Seminar on Results of Academic Study

Analysis of the Effect of Game Evaluation on Study Boredom of E-learning on Basic Imported Goods Inspection

Monday, November 28, 2022

Pengkaji

Rahmat Fauzi
Pengembang Teknologi Pembelajaran
Pusdiklat Bea dan Cukai

Opening Speech

Bambang Juli Istanto
Plt. Kepala Pusdiklat Bea dan Cukai

Moderator

Aldi Pratama
Pengembang Teknologi Pembelajaran
Pusdiklat Bea dan Cukai

MC

Arief Chahyah Pramudhika
Pelaksana Pusdiklat Bea dan Cukai

Penilai Metodologi

Prof. Dr. Dedi Purwana E.S., M.Bus
Dosen Universitas Negeri Jakarta

Penilai Substansi

Dr. Ika Kurniawati, M.Pd
Pengembang Teknologi Pembelajaran
Ahli Madya

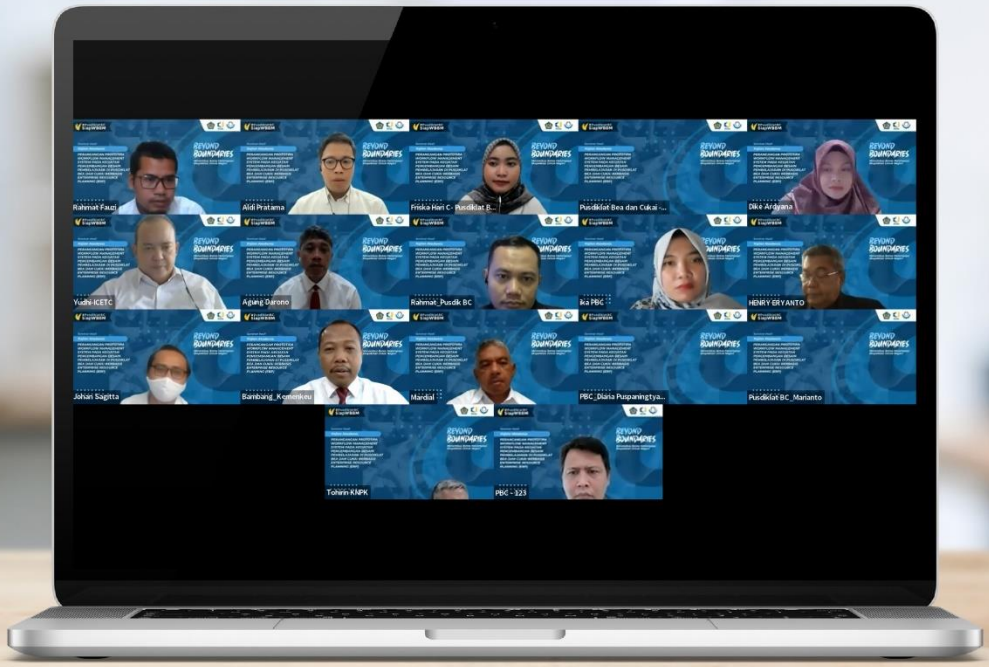
Penilai Substansi

Abdul Wahid Fajar Amin
Kepala Subbagian Tata Laksana
Sekretariat Badan

Seminar on Results of Academic Study

Enterprise Resource Planning (ERP) Based Workflow Management System Prototype Design in Learning Design Development Activities at theCustoms and Excise Education and Training Center

Monday, December 12, 2022



Pengkaji I

Yudhi Dharma Nauly

Kepala Bidang Perencanaan dan Pengembangan Pembelajaran Pusdiklat Bea dan Cukai

Pengkaji II

Aldi Pratama

Pengembang Teknologi Pembelajaran Pusdiklat Bea dan Cukai

Opening Speech

Bambang Juli Istanto

Plt. Kepala Pusdiklat Bea dan Cukai

Moderator

Rahmat Fauzi

Pengembang Teknologi Pembelajaran Pusdiklat Bea dan Cukai

MC

Friska Hari Cahyaningtyas

Pelaksana Pusdiklat Bea dan Cukai

Penilai Metodologi

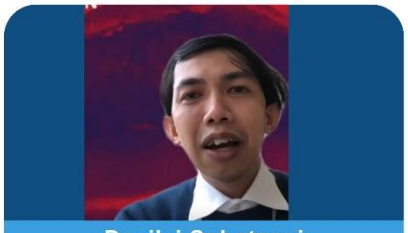
Prof. Dr. Henry Eryanto, M.M.

Dosen Universitas Negeri Jakarta

Penilai Substansi

Agung Darono

Widyaiswara Pusdiklat Pajak



Penilai Substansi

Abdul Wahid Fajar Amin

Kepala Subbagian Tata Laksana Sekretariat Badan

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ANALYSIS OF IMPLEMENTATION AND UTILIZATION OF EASE OF IMPORT FACILITIES FOR EXPORT DESTINATION (KITE) FOR THE PURPOSE OF SUPPORTING EXPORT-ORIENTED SMALL-MEDIUM INDUSTRY (SME)

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FINANCIAL EDUCATION AND TRAINING AGENCY
JAKARTA
2022

ABSTRACT

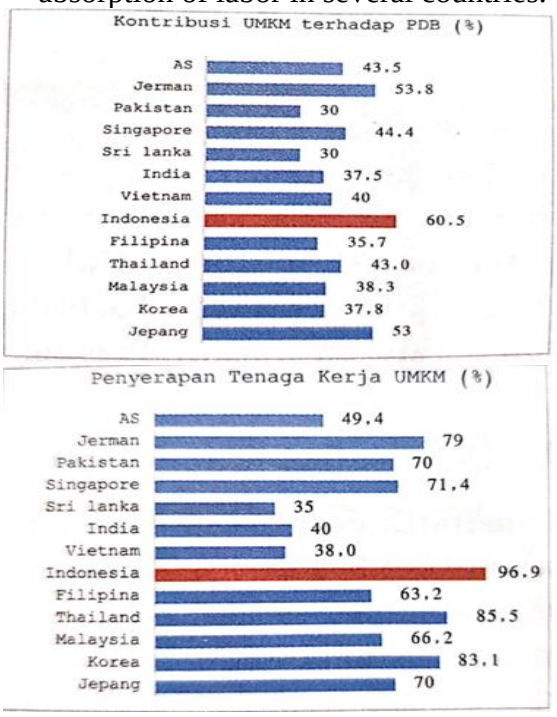
This academic study aims to analyze the application and utilization of provided KITE IKM facilities based on Minister of Finance Regulation Number 177/PMK.04/2016 as amended by Minister of Finance Regulation No.110/PMK.04/2019. The method used in this research is mix method, namely a combination of quantitative and qualitative methods. The quantitative method was carried out in a survey to all KITE IKM companies registered with the Directorate of Customs and Excise Facilities as of 31 December 2021 and to officials at KPPBC who supervise KITE IKM companies. It proceeded with the qualitative method, namely in-depth interviews on the survey data obtained, to KITE IKM companies and KPPBC officials, and supported by interviews with academic sources and policy makers for the purpose of data triangulation. The results of this academic study show that the implementation and utilization of KITE IKM facilities that have been carried out since 2016 have been carried out well, before the pandemic and during the Covid-19 pandemic, in terms of licensing, import/entry of materials/goods, export/expenditure of production results, reporting of BCLKT and impact and utilization. However, several obstacles were found in the implementation and utilization as well as inputs from the policy, technical and human resources aspects.

Keywords: KITE, IKM, KITE IKM, KITE facilities, export destinations, import facilities.

A. Introduction

Uskara (2021) cites the data release from the Ministry of Cooperatives and SMEs (KUKM), that a month after Indonesia was declared in emergency for the Covid-19 Pandemic, 37,000 MSMEs reported themselves to the Ministry of Cooperatives and SMEs and stated the difficulties experienced by MSME actors during the pandemic. These difficulties are divided into four, namely: first, a decrease in sales due to reduced community activities (as consumers) as much as 56%; secondly, capital/financing difficulties (as much as 22%) due to difficult capital turnover due to declining sales; third, product distribution obstacles due to restrictions on the movement of product distribution in certain areas (as much as 15%); and fourth, difficulties with raw materials (as much as 4%) because raw materials in several regions/countries are difficult to obtain due to regional quarantine policies (*lockdown*).

Table 1.1. MSME Contribution to GDP and absorption of labor in several countries.



Source: MSME Financing, Airlangga Hartarto (2021), sourced from ADB Database (2020), ADB Institute (2018), ADB Institute (2015), METI Japan (2019), MSS Korea, Ministry of KUKM (2019)

The contribution of MSMEs to GDP and employment in several countries can be seen in Table 1.1. The average contribution to GDP in the 13 countries is 42% (Indonesia is above the average with a contribution of 60.5%) and the average employment is 65.2% (Indonesia is at 96.9%). From this data, MSMEs in Indonesia have the highest contribution to GDP and

employment among other countries, **with the note that the definition of MSMEs varies between countries.**

The Director General of Small and Medium Industries and Multifarious Industries, Ministry of Industry, on the occasion of a discussion entitled "Upakarti, strengthening Indonesian Small and Medium Industries", which was held by the West Merdeka Forum, August 8, 2022 stated that Small and Medium Industries (IKM) in Indonesia have so far reached around 4.4 million and able to absorb 18.64 million workers. Almost 99.7 percent of Indonesia's total industrial business units are small and medium scale. In fact, almost 17.84% of income to Gross Domestic Product (GDP) comes from the manufacturing industry, which is an IKM unit. Thus, it is necessary to support the improvement of SMEs so that they can play a bigger role as part of the supply chain of large industries and can compete in the export market.

One of the supports needed for SMEs is to provide fiscal facilities. In 2016, the Ministry of Finance provided facilities to IKMs by issuing Minister of Finance Regulation Number 177/PMK.04/2016 concerning Exemption from Import Duty and Not Collecting Value Added Tax or Value Added Tax and Sales Tax on Luxury Goods on Imported Goods and/or Materials and/or Machinery made by Small and Medium Industries with Export Purposes, as amended by Regulation of the Minister of Finance No. 110/PMK.04/2019. This facility is known as the KITE IKM Facility. In fact, as of December 31, 2021 there were only 113 KITE IKM companies registered with the Directorate General of Customs and Excise, as presented in Table 1.2.

Table 1.2. Data on the number of small and medium industries receiving KITE IKM facilities as of December 31, 2021 throughout Indonesia.

Database per Tanggal 31 Desember 2021		
No	**IKM**	**Total**
1	Skala Kecil	20
2	Skala Menengah	93
3	Konsorsium	1
JUMLAH IKM		**113**
JUMLAH KONSORSIUM		**1**

Source: Directorate of Customs and Excise Facility DGCE, February 2022

As previously stated, the Director General of IKM and Multifarious, Ministry of Industry stated that the number of IKM is currently around 4.4 million, meaning that as of December 2021 around 0.00257% of IKM have joined as KITE IKM companies. Certainly, this is a very small number compared to the existence of the IKM itself, and it is necessary to examine why many IKM have not/did not join KITE IKM and take advantage of the facilities provided.

If we look closely, this can be seen from internal factors, namely the provision of KITE IKM facilities, whether the KITE IKM facilities provided have contributed sufficiently for IKM to upgrade and provide an impact/benefit for increasing exports so that they can attract IKM that have not yet joined to become a KITE IKM company. However, this can also be seen from external factors, whether the provision of this facility has been well socialized among SMEs, especially export-oriented SMEs so that SMEs can see its benefits. In this study, researchers were interested in looking at internal factors and focused more on analyzing the application and utilization of KITE IKM facilities.

The purpose of this research was to analyze the application and utilization of the KITE IKM facility policy by KPPBC which oversees the KITE IKM facility and recipients of the KITE IKM facility, and analyzes the constraints encountered in implementing and utilizing the KITE IKM facility.

This research was conducted within DGCE, namely at the Directorate of Customs and Excise Facilities (national data and policies), within KPPBC which oversees KITE IKM facilities (by survey), and in-depth study at 4 (four) KPPBC namely KPPBC Surakarta, Semarang, Yogyakarta and Denpasar and all recipients of KITE IKM facilities in Indonesia. The reason for choosing the four KPPBCs is because they are the supervision office for the largest KITE IKM facilities nationally in terms of the number of companies, which is around 57.5% of the total KITE IKM facilities.

It is hoped that this research will benefit several related parties, namely practically for the Ministry of Finance, especially DGCE as feedback in making policies related to support for SMEs. For DJBC Employees, IKM companies and practitioners, to provide information and understanding about the provision of KITE IKM facilities. As for the Customs and Excise Education and Training Center, it can be used as scientific supporting materials related to KITE IKM. Another benefit of this research theoretically can be used as initial information for further research.

B. Literature review

B.1. Definition of Exports and Export Driving Factors

According to Samulson and Nordhaus, exports are goods and services produced domestically and purchased by foreigners. According to Mankiw, exports also mean goods that are produced domestically and sold abroad (Sujianto, 2017). Meanwhile, according to Law Number 2 of 2009 concerning the Indonesian Export Financing Agency, it is explained that export is the activity of moving out goods from the Indonesian customs area and services from the territory of the Republic of Indonesia (Sutedi, 2014). In Law Number 10 of 1995 concerning Customs as amended by Law Number 17 of 2006, export is defined as the activity of moving out goods from the customs area.

One of the factors driving exports is government policies related to foreign trade, tax facilities and incentives. Regarding tax incentives, this can be done by providing convenience to export-oriented producers which can be done by providing technology assistance, product innovation training, low interest credit assistance, exemption or relief from import duties or taxes in order to import raw materials or capital goods/ production machines and so on.

B.2. Small and Medium Enterprises (UKM) and Small and Medium Industries (IKM)

There are several business categories based on Article 35 of Government Regulation No. 7/2021, namely Micro Enterprises, Small Enterprises and Medium Enterprises or known as MSMEs. This business category is differentiated according to business capital criteria or annual sales results criteria. The criteria for business capital are the capital used for the establishment or registration of business activities.

Small Business is a productive economic business that stands alone, which is carried out by individuals or business entities that are not subsidiaries or not branches of companies that are owned, controlled, or become part either directly or indirectly of Medium Enterprises or large businesses that meet the criteria of a Small Business.

- In terms of business capital criteria, SEs have business capital of more than IDR 1,000,000,000.00 (one billion rupiahs) up to a maximum of IDR 5,000,000,000.00 (five billion rupiahs) excluding land and buildings for business premises.
- In terms of sales results criteria, Small Businesses have annual sales of more than IDR 2,000,000,000.00 (two billion rupiahs) up to a maximum of IDR 15,000,000,000.00 (fifteen billion rupiahs)

Medium Enterprises are productive economic enterprises that stand alone, which are carried out by individuals or business entities that are not subsidiaries or branches of companies that are owned, controlled, or become part of either directly or indirectly Small Businesses or large businesses that meet the criteria of Medium Enterprises.

- In terms of business capital criteria, MEs have business capital of more than IDR 5,000,000,000.00 (five billion rupiahs) up to a maximum of IDR 10,000,000,000.00 (ten billion rupiahs) excluding land and buildings for business premises.
- In terms of sales results criteria, Medium Enterprises have annual sales of more than IDR 15,000,000,000.00 (fifteen billion rupiahs) up to a maximum of IDR 50,000,000,000.00 (fifty billion rupiahs).

In Regulation of the Minister of Industry no. 64/M-IND/PER 7/2016 concerning the Amount of Workforce and Investment Value for Industrial Business Classification, it is stated that industrial business activities are determined based on the number of workers and/or investment value.

Furthermore, in Article 3 of the Minister of Industry Regulation, industry criteria are regulated, namely:

a. **Small industry** is an industry that employs a maximum of 19 (nineteen) workers and has an investment value of less than IDR 1,000,000,000.00 (one billion rupiahs) excluding land and buildings for business premises.
b. **Medium Industry** is an industry that employs a maximum of 19 (nineteen) workers and has an investment value of at least IDR 1,000,000,000.00 (one billion rupiahs) or employs a minimum of 20 (twenty) workers and has an investment value of at most IDR 15,000,000,000.00 (fifteen billion rupiahs).

The definition of Small and Medium Industries (IKM) according to Minister of Finance Regulation Number. 110/PMK.04/2019 is a business entity that meets the criteria for small industry or medium industry and has been designated as a recipient of the KITE IKM facility. The criteria referred to here are the criteria as stipulated in the provisions of the KITE IKM itself, namely being a productive economic business or having processing, assembly and/or installation activities and having an investment value, net worth or sales proceeds of a certain amount per year (in detail it will be explained in the description of KITE IKM). So it is more towards business entities that carry out processing, assembling and/or installation activities.

B.3. MSMEs, the Covid-19 Pandemic and the Global Value Chain (GVC)

OECD (2020) Coronavirus (Covid-19): SME Policy Response states that there are several ways the coronavirus pandemic has affected the economy, especially SMEs, both from supply and demand sides.

a. On the supply side, companies are experiencing reduced labor supply, because workers are unwell or need to look after their families while schools are closed and people's movements are restricted.
b. On the demand side, a sudden and dramatic loss of demand and income leads to severe liquidity shortages, and consumers experience loss of income which reduces spending and consumption.

In the last two decades, the GVC concept has become very popular. According to the World Bank, GVC is a process to produce one finished product that involves several countries starting from the production process to the marketing process. GVC can play a role in driving increased employment and economic growth as well as improving a country's standard of living.

Uskara (2021), states that the existence of MSMEs has also been proven to strengthen the specialization and resilience of the national economy. This is in accordance with the GVC business model which offers a competitive advantage, namely the efficiency of company activities, which is realized by specialization. GVC can also reach developing countries to join the world

supply chain. It is necessary to map MSMEs nationally in relation to the products and business orientation of Indonesian MSMEs and large industries in the country. Collaboration and coordination between companies are needed because companies are in a supply chain that basically wants to satisfy the same end customers.

B.4. KITE IKM facilities

Based on Article 2 paragraph (1) of PMK 110/2019, KITE IKM facilities can be provided to business entities of small or medium industry scale, business entities formed by a combination of IKMs, IKMs designated by several IKMs in 1 (one) center; or Cooperation.

Article 3 PMK 110/2019 regulates the criteria for small and medium industries that can be given KITE IKM facilities. For small industries, the criteria that must be met are:

a. is a productive economic business or has processing, assembly and/or installation activities; and
b. has investment value, net worth or sales proceeds per year with the following conditions:
    1) maximum investment value of IDR 1,000,000,000.00 (one billion rupiahs) excluding land and buildings where the business is located if they are one with the location where the owner lives.
    2) net assets of more than IDR 50,000,000.00 (fifty million rupiahs) up to a maximum of IDR 500,000,000.00 (fifty hundred million) rupiahs); or
    3) annual sales proceeds of more than IDR 300,000,000.00 (three hundred million rupiahs) up to a maximum of IDR 2,500,000,000.00 (two billion five hundred million rupiahs).

While the criteria for medium-sized industries that can be given KITE IKM facilities are as follows:

a. is a productive economic business that has processing, assembly and/or installation activities; and
b. has investment value, net worth, or annual sales proceeds with the following conditions:
    1) investment value of more than IDR 1,000,000,000.00 (one billion Rupiahs) up to a maximum of IDR 15,000,000,000.00 (fifteen billion Rupiahs);
    2) net assets of more than IDR 500,000,000.00 (five hundred million rupiahs) up to a maximum of IDR 10,000,000,000.00 (ten billion rupiahs); or
    3) annual sales proceeds of more than IDR 2,500,000,000.00 (two billion five hundred million rupiahs) up to a maximum of IDR 50,000,000,000.00 (fifty billion rupiahs).

1. KITE IKM Facility licensing procedures

The procedure for licensing KITE IKM facilities is regulated in Minister of Finance Regulation No. 110/2019 as depicted in Figure 1.1. In general, the flow of procedures for licensing KITE IKM facilities can be explained as follows:

a. Business entity that fulfills the requirements as an IKM submits an application electronically to KPPBC which supervises the location of the factory with the highest import volume.
b. Applications are electronically submitted through the Indonesia National Single Window (INSW) portal.
c. KPPBC overseeing the factory location conducts research on the application as follows:
    1) Examination of documents and locations, no later than 3 (three) working days from the date of readiness of IKM for site inspection at the time of application.
    2) Making Inspection Minutes
    3) Invite and analyze the presentation of business processes and requirements criteria by business entity leaders.
d. KPPBC makes a decision on approval or rejection no later than 1 (one) working day after the Minutes of the Location Inspection. In case of refusal, to submit a letter of refusal accompanied by reasons for refusal.
e. In the event that all of the requirements and results of the presentation are fulfilled, KPPBC issues a Permit Decree (SKEP) for KITE IKM and submits the application system (module) for KITE IKM.

2. Import and/or Entry Procedures for goods and/or materials that use the KITE IKM Facility.

Companies that receive the KITE IKM Facility can be given facilities for imported goods and/or materials in the form of raw materials, auxiliary materials, packaging materials, samples and machinery. For the import or entry of these goods, facilities are given in the form of exemption from import duty and no PPN or PPN and PPnBM and the guarantee quota is deducted in the amount of the value of the fiscal facility. Provisions for the import or entry of goods/materials for KITE IKM facilities can be seen in Figure 1.2.

Figure 1.2. Import and or Entry by Recipients of KITE IKM Facilities Customs Declaration and Fiscal Facility Documents
Source: Directorate of Customs Facilities.

From Figure 1.2 it can be explained that for the purpose of import and/or entry of goods and/or materials, KITE IKM companies are required to prepare and make customs notification documents in accordance with the origin of the goods and/or materials. If the goods and/or materials originate from import activities, then the customs document for Notification of Goods Import (PIB/BC 2.0) must be used. Meanwhile, if the goods come from a company that is in the customs area or within the country that also has other customs facilities such as Bonded Storage, then the customs notification document uses BC 2.5 (from Bonded Zone (KB), Bonded Warehouse, Bonded Exhibition Place) or BC 2.8 (from Bonded Logistics Center).

3. Procedures for export or delivery of production results in the context of KITE IKM facilities

Completion of the KITE IKM facility by the KITE Company is by carrying out export activities of production results or delivery of production results, one of which is to TPB. Broadly speaking, the release of goods from companies receiving KITE IKM Facility as well as customs notification documents for export activities or delivery to TPB are depicted in Figure 1.3.

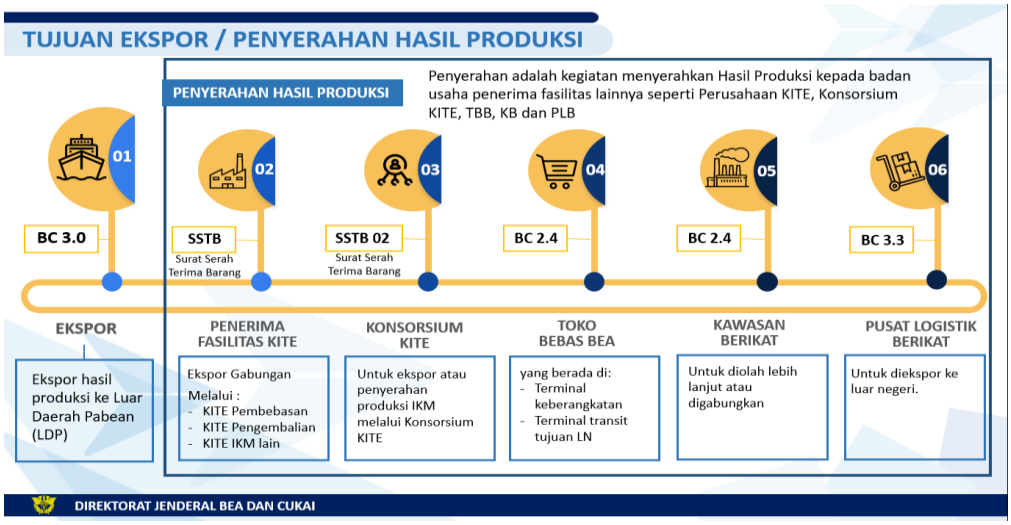


Figure 1.3. Releasing goods from KITE IKM Facility Recipients
For the Purpose of Export and or Delivery of Production Results
Source: Directorate of Customs Facilities

From Figure 1.3 it can be explained that in the context of export activities and/or delivery of production results, companies receiving KITE IKM facilities are required to prepare and make customs notification documents in accordance with their activities. If production results are to be exported, it is mandatory to use Goods Export Declaration (PEB/BC 3.0). Meanwhile, if the production results are to be handed over to a company located in the customs area or within the country, one of which has other customs facilities such as TPB or KITE, then the customs notification document uses BC 2.4 or Goods Handover Letter (SSTB) for (Bonded Areas, Shops Duty Free, KITE) or BC 3.3 (Bonded Logistics Center).

4. Accountability reporting mechanism on the KITE IKM Facility

KITE IKM Facility Accountability Report is a report that must be made by the company receiving the KITE IKM facility to account for materials and/or goods that receive customs facilities, which in the provisions is called the BCLKT-03 Report. BCLKT-03 includes settlement of exported products, sale of products to other places in the Customs area or domestically using BC 2.4 documents and destruction of damaged/rejected goods and/or materials, damaged *work in process* goods or damaged production products using BC 2.4 document.

In general, the accountability reporting mechanism for IKM Facilities, which includes the preparation and production of BCLKT-3 documents by recipients of the KITE IKM facilities and the submission mechanism, as well as research on accountability reports for KITE IKM facilities by officials at KPPBC overseeing the KITE IKM facilities are described in Figure 1.4.

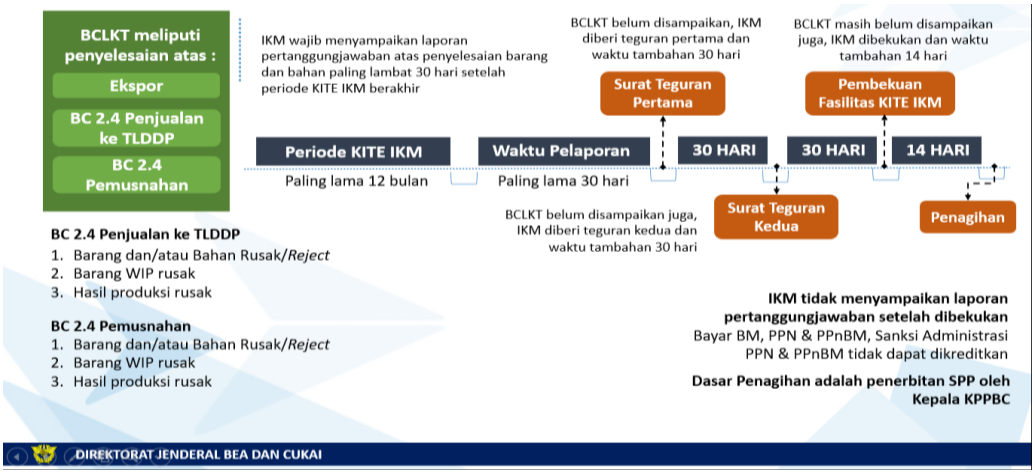


Figure 1.4. Accountability Report (BCLKT 03)
KITE IKM facilities
Source: Directorate of Customs Facilities.

B.5. Previous Research

Research that has been conducted related to KITE IKM facilities in order to support export-oriented businesses includes:

1. Masruri Muchtar and Haris Suganda in the Customs and Excise Perspective Journal Vol.5, No, 1, 2021 entitled Encouraging Small and Medium Industry Growth through Import Facility for Export Purposes. This study aims to identify the constraints that arise, to conduct analysis, and to provide alternative solutions to problems that occur with the utilization of KITE IKM facilities in the working area of KPPBC TMP B Yogyakarta. This study is a qualitative research in the form of a case study. Based on the research results, there are still several obstacles in encouraging the growth of SMEs. Internal problems are related to the lack of intensity and the extent of efforts to socialize and educate KITE IKM facilities, weak governance or archiving of customs documents, uneven knowledge and technical competence of employees, and less optimal application of risk management. External problems are related to the lack of knowledge and understanding of business actors on procedures or provisions, and the ineffectiveness of synergy and strategic coordination between agencies or institutions.
2. Mila Mumpuni at the Proceedings of the National Seminar and *Call For Paper* of the Faculty of Economics, Tidar University, October 15, 2019 with the title Study of KITE IKM Facilities for MSMEs in the Magelang area. This article is the result of a literature review on the potential for increasing production for MSME players in the area around Magelang City and Magelang Regency. With regards to exports, the Ministry of Finance in this case through DGCE has facilitated the product "KITE IKM Facility". The facility is in the form of import duty exemption and

not-collected PPN and PPnBM on imported goods and or materials to be processed, assembled and/or installed on other goods for export purposes. KITE IKM facilities are regulated in Minister of Finance Regulation (PMK) Number 177/PMK.04/Tahun 2016 for MSMEs (so-called Small and Medium Industries or IKM). This facility can be optimized with the synergy between central government agencies and local government agencies. The dynamic synergy results will later become an opportunity for MSMEs to improve the quality of their production and strengthen the community's economy to be implemented properly.

3. Gilang Gumilar, Imam Suyadi and Rosalita Rachma Agusti, in the Journal of Taxation (JEJAK)/Vol. 6 No.32 2015 with the title Utilization of Import Facilities for Export Purposes (KITE) to Increase Domestic Exports (Study at DJBC East Java Regional Office I, Sidoarjo). This study aims to determine the process of utilizing the ease of import facility for export purposes (KITE) in the Regional Office of DJBC East Java I Sidoarjo and the increase in exports of finished goods in East Java. This research uses descriptive research with qualitative methods. The focus of this research is the process of utilizing KITE facilities, increasing the number of companies using KITE facilities, monitoring and utilization of KITE facilities, and comparison of exports before and after KITE facilities (PMK 176 & PMK 177). The results of the study showed that there were several obstacles in the utilization of KITE facilities. Among them, several companies that had previously used the KITE facility had to be revoked because they could not fulfill the requirements in PMK 176 & PMK 177.

C. Research methods

The research method used is a combination of the quantitative method and the qualitative method, which are preceded by the quantitative method and followed by the qualitative method.

C.1. Data Types and Sources

The type of data used is quantitative and qualitative data obtained from primary data and secondary data. Primary data were taken through a survey of Customs and Excise officials who provide KITE IKM facility services and employees at companies receiving KITE IKM facilities. Primary data were also obtained from in-depth interviews with officials at KPPBC and several companies receiving KITE IKM facilities. Secondary data were obtained from the Directorate of Customs and Excise Facilities, Directorate of Customs and Excise Information (IKC), BPS and other *open source* data.

The first population as the object of quantitative research is at least 70% of recipients of KITE IKM facilities who are registered and active as of December 31 2021, namely 104 KITE IKM companies. The second population that is the object of research is employees at KPPBC who oversee KITE IKM (group of officials) from 20 KPPBC throughout Indonesia. From these two populations, data were collected using surveys and processed quantitatively, then qualitatively through in-depth interviews with several

KITE IKM companies and groups of officials. In-depth interviews were conducted by taking research samples from a group of officials at 4 (four) KPPBC out of 20 KPPBC overseeing KITE IKM companies, namely KPPBC Surakarta, Yogyakarta, Semarang and Denpasar. The KPPBC samples were chosen because they are the largest KITE IKM facility supervision offices nationally in terms of the number of companies, which is around 57.5% of the total KITE IKM facilities. Interviews were also conducted with the KITE IKM group of companies at the 4 KPPBC. The data collection techniques used were literature studies, surveys and interviews.

C.2. Examined Elements

There are 2 (two) variables which are the elements in this study, which originate from Minister of Finance Regulation No. 177/PMK.04/2016 as amended by PMK No. 110/PMK.04/2019, which consists of the variable of Implementation and Utilization of KITE IKM facilities, and the variables of Constraints to the implementation and utilization of KITE IKM Facilities. The two variables are described in several dimensions.
For the variable of Implementation and Utilization of KITE IKM facilities, it is described in 5 (five) dimensions, namely:

1. KITE IKM facility permits, which are translated into 3 indicators;
2. Procedures for the import and/or entry of goods and/or materials for KITE IKM facilities, which are translated into 5 (five) indicators;
3. Procedures for export or delivery of products produced by KITE IKM facilities, which are translated into 4 (four) indicators;
4. Accountability Report of KITE IKM facilities, which is described in 4 (four) indicators; and
5. Utilization of KITE IKM facilities in terms of ease of export, which is described in 2 (two) indicators.

Variable of constraints on the implementation and utilization of the KITE IKM Facility are described in 2 (two) dimensions, namely:

1. Constraints in implementing KITE IKM facilities which are also indicators that will be examined.
2. Constraints on the use of KITE IKM facilities which are also research indicators.

D. Analysis and Discussion

Analysis and discussion of the results of this academic study are presented in 4 (four) sections, namely data characteristics, validity and reliability tests based on research instruments, analysis of the application and utilization of KITE IKM facilities which includes the 5 (five) dimensions mentioned above, analysis of implementation constraints and utilization of KITE IKM facilities and discussion of the application and utilization of KITE IKM facilities for the dimensions studied.

D.1. Data Characteristics, Validity and Reliability Test Based on Research Instruments

1. Characteristics of Data Sources Based on Survey Methods
   a. The Response Rate for respondents from official groups was 23 respondents from 14 KPPBC or 70%. For respondents from the KITE IKM company group, 72 out of 104 companies filled out the survey. When compared to the target of completing the survey of 100 respondents, the response rate for completing the review survey reached 72%. This percentage figure is sufficient to represent the population because of the homogeneous nature of the data.

   b. Characteristics of respondents based on position and education level. For respondents from a group of officials, the respondents of this study were the Head of the Customs and Excise Service Section (11), the First Expert Customs and Excise Examiner (PBC) (6) and Executor Examiner (6). In terms of education, they consisted of Diploma I/D-1 (3), Diploma III/D-3 (1), Strata 1/S-1 (12), and Strata 2 or 3 / S-2/S-3 (7). For respondents from KITE IKM companies, the respondents of this study consisted of Accounting/Financial (6), Administration Section (11), Director (8), Export/Import (EXIM) (34) and managers (13), with high school education level/ SMK (12), Diploma 1/D-1 (6), Diploma III/D-3 (11), Strata 1/S-1 (42) and 1 respondent did not fill in the level of education. In general, the characteristics of the respondents based on their positions and levels of education are sufficient to represent the population to be studied

   c. The composition of respondents based on industrial scale is small industrial scale of 17 companies and medium scale of 55 companies.

2. Characteristics of Data Sources Based on Interview Method

   Informants from each group of officials were 3 officials per KPPBC (4 KPPBCs were determined as samples) and for the sake of research ethics, the informants from the group of officials we interviewed were then called informants 1 to 4.

   For informants from the KITE IKM company group, the data sources were obtained from KITE IKM companies under the supervision of 4 sample KPPBCs. For the sake of research ethics, the informants we interviewed hereinafter are referred to as informants 5 to informants 8.

   Furthermore, for the purposes of data triangulation, interviews (in-depth interviews) were conducted with respondents from policy makers (in this case officials at the Directorate of Customs and Excise Facilities, totaling 2 people) referred to as Informants 9 and academics who focus on the development of small and medium industries that come from a university (in this case the number of lecturers from PKN-STAN is 1 person) referred to as Informant 10.

3. Instruments of Validity and Reliability Testing

The testing of the validity and reliability instruments was carried out on 15 statement items on the variable implementation and utilization of KITE IKM facilities. This test was carried out with the help of the SPSS data processor. And the result was that all of these statements were valid to measure all variables and have reliability/consistency that can be accounted for.

D.2. Analysis and Discussion of the Implementation and Utilization of Export-Oriented KITE IKM Facilities and Their Constraints

1. KITE IKM Facility Licensing

Licensing dimensions are described in three indicators, namely criteria and requirements, application submission procedures, and service promises for the licensing process. Based on the perception survey data from the official group, 19 respondents (86.36%) thought that there had never been any complaints related to the criteria and requirements as well as procedures for permitting KITE IKM facilities. Whereas in the KITE IKM facility licensing service promise, all official respondents agreed and strongly agreed that it was in accordance with the applicable regulations. This is in line with what was conveyed by the KITE IKM companies that in licensing KITE IKM facilities around 67 respondents (93%) stated that they agreed and strongly agreed that the three indicators for licensing KITE IKM facilities had been properly implemented.

In the in-depth interviews with informants 1 to 10, it was found that most were of the opinion that the KITE IKM facility licensing process could be implemented properly. This is strongly supported by the assistance and accompaniment provided by customs and excise officers for IKM companies that apply for permits, in addition to ease of service and site inspections.

Suggestions for improvement submitted by official respondent groups, KITE IKM companies and from academic groups as well as KITE IKM facility policy makers on the licensing dimensions of KITE IKM facilities are:

a. The requirements for KITE IKM licensing should be differentiated between small and medium industries, taking into account the convenience and simplification of the licensing requirements and processes. One of the considerations is related to differences in the availability of human resources and other resources
b. The licensing requirements and process should be harmonized with the Job Creation Law to provide greater certainty in its application in the field, such as provisions for implementing risk-based business licensing and simplifying the basic requirements for business licensing.

The results of the surveys and interviews related to licensing dimensions are in line with the secondary data regarding the number of

KITE IKM licensing decrees (SKEP) issued by all KPPBC overseeing KITE IKM facilities since the promulgation of PMK No.177/PMK.04/2016 until data collection in August 2022 as depicted in Figure 1.5 and Figure 1.6.

Figure 1.5
Data source: Directorate of Customs Facility, August 2022, (Processed)

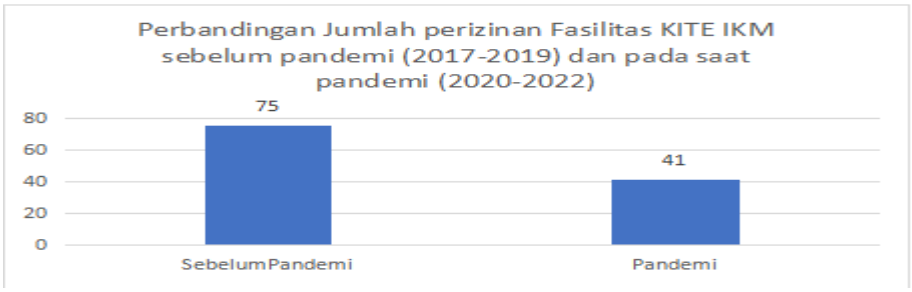


Figure 1.6
Data source: Directorate of Customs Facility, August 2022, (Processed)

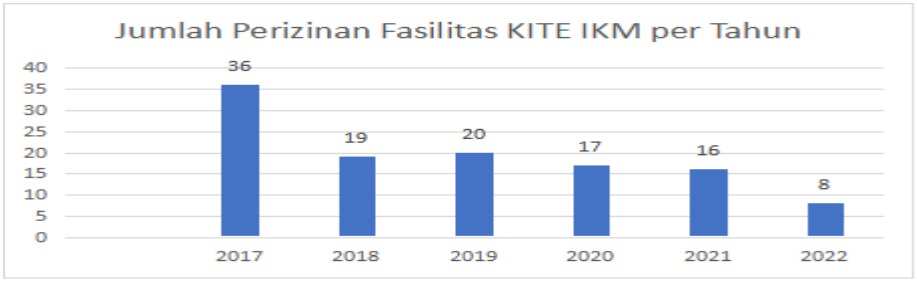


Figure 1.5 and Figure 1.6 show the development of KITE IKM licensing since 2016. The increase in the number of companies obtaining the most permits for KITE IKM facilities in 2017 amounted to 36 companies, and then the increase was averaging between 15 companies to 20 companies per year from 2018 to 2021. What is interesting from the data on the development of KITE IKM facility permits, even though in 2020 it began to be affected by the Covid 19 pandemic, is that the number of companies that obtained KITE IKM facilities continued to increase, although it decreased slightly compared to before the pandemic. This is inseparable from KPPBC's efforts to continue to provide assistance and accompaniment to IKMs with export potential to obtain permits for KITE IKM facilities.

The assistance and accompaniment carried out by customs and excise officers at KPPBC for IKM companies with export potential is in accordance with government policies as outlined in Articles 39 to Article 54 of Government Regulation Number 7 of 2021 regarding ease of doing

business. In this regulation, it is mandated that the Central and Regional Governments encourage MSMEs by providing guidance and registration to obtain business licensing facilities, by carrying out, among others, assistance activities through facilitation of technical guidance, consultation and/or training.

2. Procedures for Import and/or Entry of Goods and/or Materials for KITE IKM Facilities

The dimensions of the procedures for Import and/or entry of goods and/or materials for KITE IKM facilities are described in 5 (five) indicators, namely preparation/filling of customs notifications for the import of goods and/or materials (PIB/BC 2.0 documents), preparation/filling of notifications for the import of goods and/or materials/or materials into the company (documents BC 2.5, BC 2.8 and others), provisions regarding guarantee quotas, procedures for import and/or entry of goods and/or materials, and service time for imports and/or entry of goods and/or materials for KITE IKM facilities.

Based on the perceptions of the official group, 17-18 respondents (73.91% - 78.26%) stated that they had never had any complaints related to the five indicators above. This is in line with what was conveyed by the KITE IKM companies that in the import/entry of goods/materials for the KITE IKM facility, around 62 - 67 respondents (86.11% -93.03%) agreed and strongly agreed to the five indicators of import and/or import procedures for goods and/or materials for KITE IKM facilities have been properly implemented.

From the in-depth interviews it is known that most officials and companies of KITE IKM are of the opinion that policies related to import procedures and/or entry of goods and/or materials for KITE IKM facilities, which are described in the 5 (five) indicators, can be implemented properly.

Based on the survey data and interviews with KITE IKM officials and companies, the following information was obtained:

a. In preparing/filling-in customs notifications, both PIB and BC 2.8 to PLB, KITE IKM companies use the services of PPJK, and to anticipate errors in filling-in, validation is carried out first by the company, although it turns out that filling-in errors still occur frequently.
b. The guarantee quota provisions in general can still cover the activities of KITE IKM companies, as long as they are followed by discipline in preparing and submitting the BCLKT-03 report, so that the large guarantee quota is maintained.
c. Procedures for the import and/or entry of goods and/or materials are generally smooth, although there is still uncertainty related to exceptions to the provisions of prohibiting import restrictions for IKM and high risk profiling.

Suggestions for improvement submitted by official respondent groups, KITE IKM companies and from academic groups as well as KITE IKM

facility policy makers on the dimensions of import procedures and/or entry of goods and/or materials for KITE IKM facilities are as follows:

a. In order to improve the policy, given the need for imported raw materials, KITE IKM companies should use the consignment business process (because the amount is not too large), so that KITE IKM facilities can accommodate using the Consignment Note document as one of the customs settlement documents for dispatched goods.
b. It is proposed that DGCE make efforts to synergize with universities or other work units, to provide in-depth education and assistance to KITE IKM companies in fulfilling import procedures and/or entry of goods and/or materials for KITE IKM facilities. This is intended to make KITE IKM companies more independent and also to maintain the confidentiality of their data, and to grow the company's confidence to comply with customs regulations.

Obtaining the survey data related to dimensions of import procedures and/or entry of goods and/or materials for KITE IKM facilities, we can compare them with the secondary data related to the number of actual imports and/or imports of KITE IKM companies from 2017 to 2021 as illustrated in Figure 1.7 to Figure 1.10.

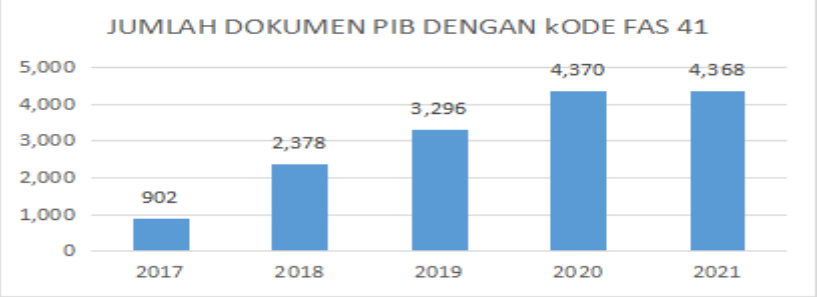


Figure 1.7
Data Source: IKC Directorate, August 2022 (Processed)

The number of actual import documents for raw materials/auxiliary materials using PIB documents (facility code 41) in Figure 1.7 shows that from 2017 to 2021 the number of PIB documents increased although this was followed by an increase in the number of companies obtaining KITE IKM facility permits. From Figure 1.7 it can also be seen that even though the Covid-19 pandemic began in 2020, the realization of the number of PIB documents by KITE IKM companies showed a quite significant increase, as well as being an indicator that KITE IKM companies were still able to survive and thrive during the Covid-19 pandemic. This is also in line with the realization of the import value of raw/auxiliary materials in US Dollars as shown in Figure 1.8,

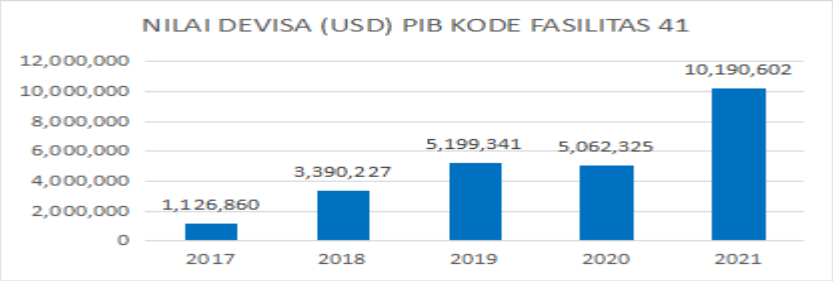
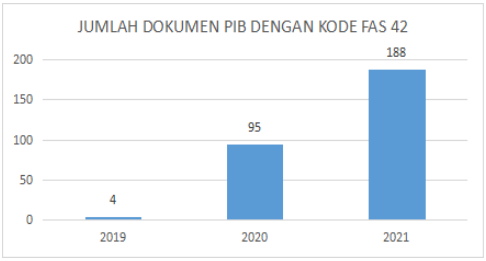
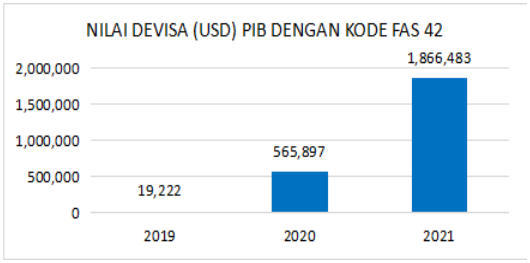


Figure 1.8
Data Source: IKC Directorate, August 2022 (Processed)

Regarding the import of goods in the form of machinery by KITE IKM companies using the PIB document (facility code 42) taken from the secondary data from 2019 to 2021 in Figure 1.9 and Figure 1.10, it also shows a trend of a significant increase both in terms of the number of documents and in terms of Import Value in US Dollars.

Figure 1.9 & Figure 1.10
Data Source: IKC Directorate, August 2022 (Processed)





The policy on production machinery import facilities within the framework of KITE IKM facilities is a very appropriate policy in terms of strengthening exports, because it can support exports through product downstreaming and production cost effectiveness (business capital from the machine side), especially if local raw materials are used in the production process. The use of local raw materials and products for export purposes is one of the steps to reduce Indonesia's trade deficit because it increases exports without increasing imports of raw materials.

Based on the results of this study it is proven that the implementation of import procedures and/or entry of goods and/or materials for KITE IKM facilities based on Minister of Finance Regulation No. 177/PMK.04/2016 as amended by PMK No. 110/PMK.04/2019 is a government policy regarding tax facilities and incentives which is one of the driving factors for export activities.

3. Procedures for Export or Delivery of Production Results from KITE IKM facilities

The dimensions of the export procedures or delivery of production results from the KITE IKM facility are described in 4 (four) indicators, namely preparation/filling-in the export customs notification

of products (PEB/BC 3.0 document), preparation/filling-in the notification of the delivery of production results at the KITE IKM facility (document BC 2.4, BC 3.3 and Letter of Acceptance of Goods (SSTB)), export procedures or delivery of production results and timeliness of export services or delivery of products, and service promises stipulated in Regulation of the Minister of Finance Number 177/PMK.04/2016 as amended by PMK 110 /PMK.04/2019.

Based on the perceptions of the official group, around 91.30% of 21 respondents stated that there had never been any complaints related to the four indicators in the export procedure or delivery of production results from the KITE IKM facility. This is in line with what was conveyed by the KITE IKM companies. There were 62 to 66 respondents or around 86.11% to 91.66% who agreed and strongly agreed that the four indicators in the export procedure or delivery of production results from the KITE IKM facility had been properly implemented.

From the in-depth interviews it can be seen that most KITE IKM officials and companies are of the opinion that policies related to export procedures or delivery of production results as described in the 4 (four) indicators have been implemented properly.

Based on survey data and interviews with KITE IKM officials and companies, the following information was obtained:

a. Preparing/filling-in customs notifications for export of products (PEB/BC 3.0 documents), KITE IKM companies still use PPJK services, and there is still a potential for errors in filling in export categories (filled in using other than KITE IKM facilities).
b. In terms of the procedure for exporting products using PEB documents by KITE IKM companies, there are still those who are subject to physical inspections of goods, although this does not really interfere with the smooth running of export activities as a whole.
c. The time for export services or the delivery of production results is in accordance with the service promises stipulated in the Regulation of the Minister of Finance Number No.177/PMK.04/2016 as amended by 110/PMK.04/2019.

Furthermore, suggestions for improvements that have been submitted by the official respondent group, KITE IKM companies and from academic groups as well as KITE IKM facility policy makers regarding the dimensions of the export procedure or delivery of production results from the KITE IKM facility can be summarized as follows:

a. DGCE should synergize with universities or other work units, to provide education and assistance to KITE IKM companies in fulfilling export procedures for products produced by KITE IKM facilities. This is so that KITE IKM companies better understand export procedures and minimize errors in filling in data and the accuracy of export data.

b. There is the need to add a separate KITE IKM facility export category code to the PEB application module to provide certainty in filling in PEB data elements and minimize filling-in errors.

Obtaining the survey data related to the dimensions of export procedures or delivery of production results from KITE IKM facilities, we can compare them with the secondary data regarding the number of actual exports of production results from KITE IKM facilities from 2017 to 2021, which is illustrated in Figure 1.11. The number of realized export documents (PEB) in Figure 1.11 shows that from 2017 to 2021 the number of PEB documents increased although this was followed by an increase in the number of companies obtaining KITE IKM facility permits. From the data it can also be seen that even though the Covid-19 pandemic began in 2020, the realization of the number of PEB documents by KITE IKM companies showed a quite significant increase, as well as being an indicator that KITE IKM companies were still able to survive and develop during the Covid-19 pandemic.

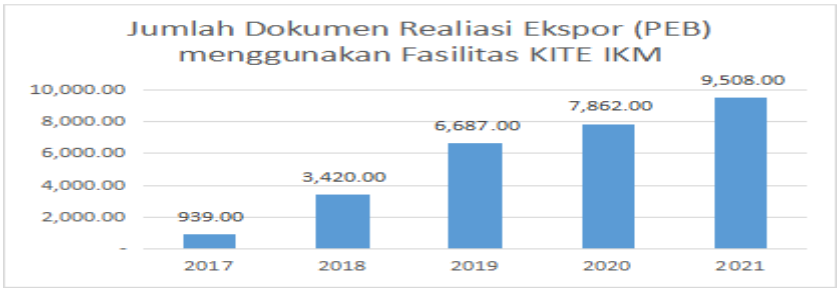


Figure 1.11
Data Source: IKC Directorate, August 2022 (Processed)

The trend of the number of realized export documents using PEB documents with the KITE IKM facility is also consistent with the data on the value of export realization using the KITE IKM facility in US Dollars as shown in Figure 1.12. The realized value of export foreign exchange also shows the performance of KITE IKM companies both before the pandemic period (2017 to 2019) and during the 2020 and 2021 pandemics, in general it maintained an increase. If we pay attention to the characteristics of the production results of KITE IKM companies that are the respondents of this study, it is more towards finished products in the form of wood/plastic furniture (sofa, dining chairs, frames and others), accessories (wallets, bags, belts, finished leather, jewelries, interior displays), textiles (golf/bicycle/riding/tennis gloves, sportswear), woodcraft/marble and others, although there are some in the form of wire, AC accessories and others. Most of the finished products produced often without a brand (will be branded by the buyer), only fulfilling orders from buyers with their own designs or according to the design desired by the buyer. This shows that KITE IKM companies still do not have the strength and confidence to have their own brand and sell under their own brand, choose the factor of ease of product marketing, do not

have the courage to compete with big brands internationally, and do not have the confidence to maintain product continuity. Things like this require assistance and education so that KITE IKM can be more confident in the international market.

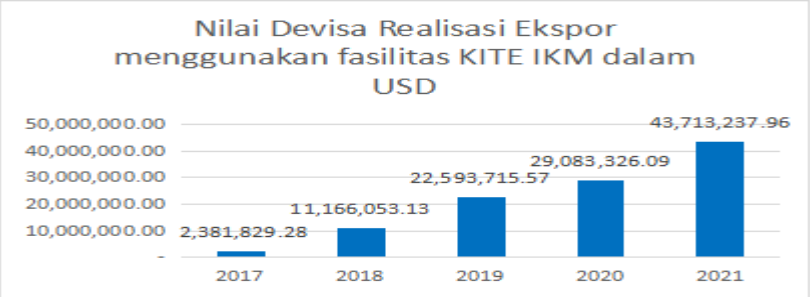


Figure 1.12
Data Source: IKC Directorate, August 2022 (Processed)

In fact, if we relate it to Global Value Change (GVC), the final product, such as that produced by most of these KITE IKM companies, can also include a series of GVC processes by supplying products to be marketed. What is needed is a party that is willing and committed to marketing KITE IKM company products in the international market (a large retail company for example), so that production and employment are maintained and can even increase. This is where synergy is needed with other ministries/agencies according to their respective authorities.

4. KITE IKM Facility Accountability Report

The dimensions of the KITE IKM facility accountability report are described in 3 (three) indicators, namely the process of fulfilling documents for the Export Realization Research Results Report (LHPRE), making accountability reports (BCLKT 03), and the timeliness of BCLKT 03 settlement service promises as stipulated in Minister of Finance Regulation No.177/PMK.04/2016 as amended by PMK No. 110/PMK.04/2019.

Based on the perceptions of the official group, 22 to 23 respondents or around 95.65% to 100% agreed and strongly agreed regarding the ease of processing documents for Export Realization Research Reports (LHPRE), preparation of accountability reports (BCLKT 03) and completion time BCLKT 03 lives up to its service promise. This is in line with what was conveyed by the KITE IKM companies that in the dimensions of the KITE IKM facility accountability report around 62 to 65 respondents or around 86.11% to 90.27% agreed and strongly agreed that it had been well implemented on the three aspects of the KITE IKM facility accountability report.

From the in-depth interviews it is known that most officials and KITE IKM companies stated that the policies related to accountability reports for KITE IKM facilities can be implemented properly. Based on

the results of the surveys and interviews with officials and KITE IKM companies, the following information was obtained:

a. Documents for LHPRE in general can be issued automatically through reconciliation of existing system integration. If it is not reconciled by the system, then manual reconciliation is carried out, and the issuance of LHPRE is very good by KPPBC officers.
b. Making an accountability report (BCLKT 03) by KITE IKM companies using the KITE IKM module, so that if there are problems, officials will provide assistance and assistance.
c. It is necessary to evaluate the CEISA 4.0 system for the implementation of CEISA 4.0, bearing in mind that there were several problems with the withdrawal of import and export data which resulted in manual input.
d. The service time for completing the BCLKT 03 research so far using the CEISA KITE tools can be done well; however, there needs to be further improvements related to the features to make it easier in the BCLKT research process.

Furthermore, suggestion for improvement submitted by the official respondent group, KITE IKM companies, academic groups and policy makers for KITE IKM facilities on the dimensions of the responsibility report for KITE IKM facilities is that the BCLKT report, if possible, be made simpler considering that the IKM company's scope of business processes is not too large and also the level of risk is relatively easy to monitor.

5. Utilization of KITE IKM Facilities

Utilization of the KITE IKM facility is described in 2 (two) indicators, namely the impact and benefits of the KITE IKM facility, and the facilities that are still needed by the KITE IKM companies. Based on the perceptions of the KITE IKM group of officials and companies, as well as the results of the interviews, the data obtained show that the impacts and benefits that were felt by KITE IKM companies were the exemption from import duty and PPN/PPnBM which greatly helped the company's finances, so that it could be more flexible in using and allocating funds for product development, increasing production capacity and adding manpower. The convenience provided to obtain imported raw materials and other goods also has an impact on KITE IKM companies being able to be more efficient in their production processes so that they can compete in producing their products for export to international markets.

Based on the secondary data sourced from the Directorate of Customs and Excise Facilities, utilization of KITE IKM facilities nationally during the period 2017 to 2020 can be seen in terms of import/export foreign exchange values, employment and central tax revenues as illustrated in Figures 1.13 to Figure 1.16.

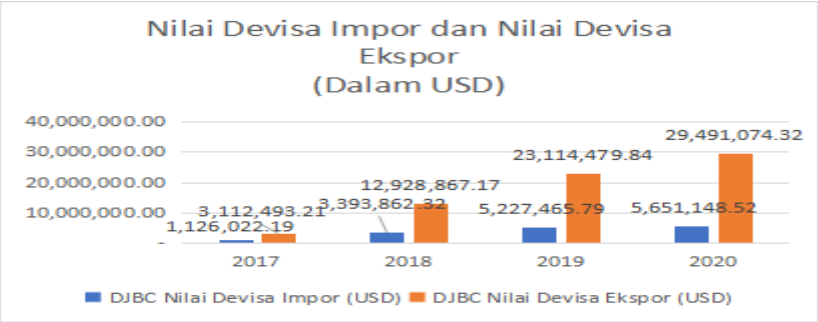


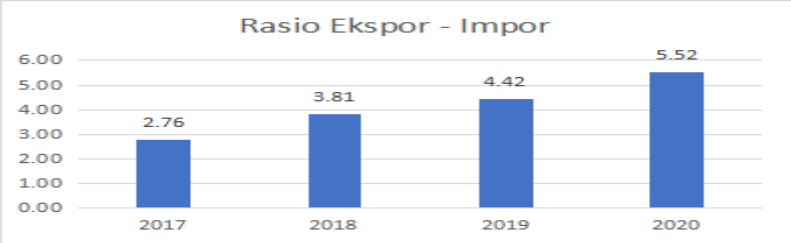
Figure 1.13

Data Source: Directorate of Customs Facility, August 2022 (Processed)

Figure 1.13 illustrates a comparison of the Value of Import Foreign Exchange (raw materials, machinery, sample goods) and the Value of Export Exchange (products) in US Dollars. From Figure 1.13 it can be seen that the KITE IKM facility can provide benefits to companies by increasing the value of Import Foreign Exchange from 2017 to 2020 which was also followed by an increase in the value of export foreign exchange produced. Even though in 2020 the Covid-19 pandemic started, the foreign exchange value imports and exports were still quite high compared to the years before the Covid-19 pandemic occurred. This shows that KITE IKM facilities can really provide benefits for KITE IKM companies.

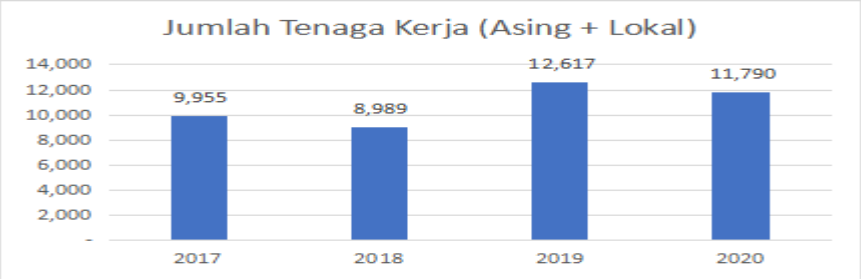
Figure 1.14

Data Source: Directorate of Customs Facility, August 2022 (Processed)



Based on the Export-Import Ratio for the 2017-2020 period in Figure 1.14, the activities of KITE IKM companies show an increasing ratio from 2017 to 2020. In 2020 the export-import ratio showed the number 5.52 although in 2020 the whole world experienced the Covid 19 pandemic, showing a fairly stable level of export-import ratio when compared to previous years.

Figure 1.15

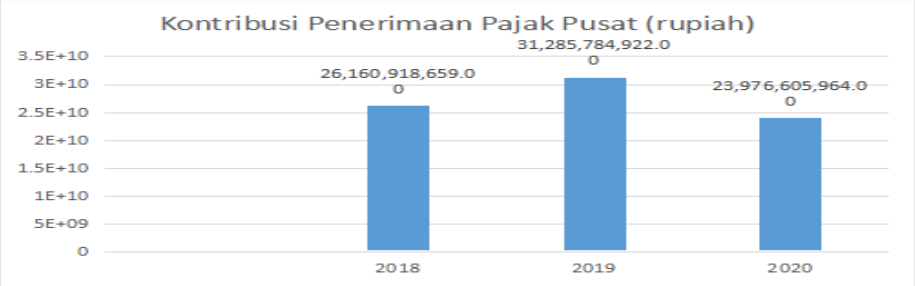


Data Source: Directorate of Customs Facility, August 2022 (Processed)

Related to the development of the number of workers, it can be seen in Figure 1.15 where the absorption of labor by KITE IKM companies shows that from 2017 to 2018 it decreased from 9,955 workers to 8,989 (a decrease of around 9.7%). In 2019 there was a significant increase compared to 2018, from 8,989 workers to 12,617 workers (up 40.36%). In 2020, when the pandemic period started, the number of workers decreased again compared to 2019, which was originally 12,617 workers to 11,790 workers (down 6.55%). However, data on the number of workers in general show that the KITE IKM Facility provides benefits for KITE IKM companies to maintain the continuity of their activities and contribute to accommodating and maintaining the number of existing employment absorption.

Figure 1.16

Data Source: Directorate of Customs Facility, August 2022 (Processed)



In terms of the contribution of central tax revenue as presented in Figure 1.16, it shows that KITE IKM companies contributed an increase in central tax revenue from 2018 to 2019 of IDR 5,124,866,263 or experienced an increase of 19.58%. Whereas in 2020 it decreased compared to 2019 to IDR 7,309,178,958 or 23%. The decline in 2020 was of course also due to the factor of the Covid 19 pandemic which not only hit KITE IKM companies but also had an impact on other companies.

6. Constraints to the Implementation and Utilization of KITE IKM Facilities

Based on the perceptions of KITE IKM company groups and groups of officials who completed the surveys through questionnaires and in-depth interviews with KITE IKM officials and companies, the existing constraints can be grouped as follows:

a. Constraints from the policy side:
   There are several policies that need further escalation or regulation of new matters because they have not been regulated in the current regulations, which are considered obstacles, namely:
   1) *Consignment Notes* (CN) documents that have not been accommodated as import documents that have received KITE IKM facilities and also export documents as export realization of KITE IKM companies, making the export-import activities of the companies receiving KITE IKM facilities that use CN documents in export/import activities to be unable to utilize the facilities provided. The fact is that many KITE IKM companies' import and export activities use the consignment mechanism.
   2) The imposition of the red line on several import or export activities experienced by KITE IKM companies creates several time constraints in terms of fulfilling raw materials.
   3) Regarding the lartas provisions, not all raw materials (for example textiles and textile products) get lartas exemptions, sometimes the application of lartas exemptions is not the same between one KPPBC to another KPPBC. The imposition of lartas can disrupt the sustainability of raw materials.
   4) There are no arrangements/provisions regarding subcontracting in PMK 177/PMK.04/2016 and PMK 177/PMK.04/2019, even though subcontracting activities can increase company activities.

b. Constraints from the technical side:
   Constraints related to the system (KITE IKM Module, CEISA KITE IKM, CEISA 4.0) include the following:
   1) Until now KITE IKM companies only have access to one device. If the device is damaged or the HR authorized for that access suddenly resigns, the company's data will be lost or inaccessible. Data back up is needed to anticipate "Force Majeur" data loss.
   2) The KITE IKM module has not yet been provided for demonstration exercises for officials, causing difficulties for officials when they are going to provide assistance to IKM companies (officials are not familiar with the KITE IKM module).
   3) CEISA KITE IKM is currently not equipped with conversion data, so officials do not have the tools to test the correctness of the data submitted by KITE IKM companies.
   4) In the implementation of data integration when reporting BCLKT for offices that are already CEISA 4.0 mandatory, it turns out that

they experienced several problems, so they had to input manually which has a high risk of input errors.

5) BCLKT reports, if possible, should be made simpler considering that IKM companies have a relatively small scope of business processes and the level of risk is relatively easy to supervise.

c. Constraints from the side of human resources (HR):
Some of the obstacles as stated by KITE IKM officials and companies related to human resources are:

1) KPPBC KITE IKM Supervisor
The frequent mutations among DGCE employees have also become a separate obstacle for KPPBC which supervises KITE IKM. Because employees who are already in charge at KITE IKM services in the end often change, settlement is needed, among others, efforts can be made so that officials who serve KITE IKM can be maintained for at least 5 years as facility agents or KITE IKM companion officials who are tasked with monitoring, fostering, educating and performing other services related to KITE IKM. Or making a complete module and knowledge capture about complete KITE IKM, especially for the relevant KPPBC, complete with company profile.

2) KITE IKM Companies
KITE IKM companies also often experience changes in human resources because they stop working and are replaced by new employees. New employees often do not understand KITE IKM facilities, so they need time to adapt. This is often repeated. The internal problem of this KITE IKM companies can be approached with the availability of KITE IKM socialization materials which are easily accessed by KITE IKM employees, and excellent service for officials who carry out KITE IKM services at KPPBC.

E. Closing

E.1. Conclusion

In accordance with the discussion of the two research questions (research variables), it can be concluded that:

1. Implementation and utilization of KITE IKM Facility policies by KPPBC which oversees IKM Facilities and the recipients of KITE IKM facilities seen from the dimensions of licensing, dimensions of procedures for importing and/or entry of goods and/or materials, dimensions of export procedures or delivery of production results, dimensions of accountability reporting mechanisms KITE IKM facilities, and dimensions of utilization of KITE IKM facilities have been running well, and can contribute to export support for the government.
2. Constraints encountered in implementing and utilizing KITE IKM facilities include policy constraints, technical constraints and human

resource (HR) constraints. Policy constraints include import/export tracking, exemptions, use of CN documents, subcontracting, and importation of machine spare parts used in the production process. Technical constraints include application systems, KITE IKM modules for official training/demo, backing up data for KITE IKM companies, and integration of CEISA 4.0 with the KITE IKM module. Meanwhile HR constraints include officials' mutation policies, officials' competencies and assistance/advisory services that require more effort. From the perspective of KITE IKM companies, the constraints on existing human resources are more on the competence and availability of human resources who handle KITE IKM facilities/customs.

E.2. Limitations

This research has limitations from a few aspects:

1. From the aspect of the object, this study focuses on the perceptions of respondents and also key informants (although supported by some authentic data in the field) which are limited only to parties related to KITE IKM facilities, not yet looking at the perceptions of parties outside KITE IKM.
2. From the time aspect, the time allocation for the research is relatively short, so that it does not comprehensively cover aspects in the field of KITE IKM facilities, for example from the aspect of supervising the implementation of KITE IKM.

E.3. Recommendation

Based on the research results obtained by researchers, some of the things we can recommend are as follows:

1. From the Policy standpoint
    a. The *Consignment Notes* (CN) documents should be accommodated as import documents (those that receive KITE IKM facilities) as well as export documents as export realization for KITE IKM companies, because the export volume of most KITE IKM companies is carried out by the goods shipment mechanism.
    b. KITE IKM companies should be allowed to accept subcontracts from other companies (recipients of other KITE IKM facilities, KITE or Bonded Zone).
    c. KITE IKM facilities should also be given to the import of spare parts for the machineries that have been imported using the facilities.
    d. KITE IKM company profiling should not be equated with general profiling and supervision as well as guidance in its implementation should be maximized to mitigate the risk of facility violations.
    e. The BCLKT report, if possible, should be made simpler considering that IKM companies have a scope of business processes that are not too large and also the level of risk is relatively easy to supervise.
    f. Licensing requirements should be more stringent. On the registration form, the NIB has a risk classification (low, medium, high). Business risk classification should be clarified to be permitted as a recipient of the KITE IKM facility so that the licensing process

is adjusted to the Job Creation Law.

g. Efforts need to be made to equalize perceptions of the provisions on import latas exemptions for KITE IKM Companies.

2. From the technical side
   a. System Related (Module KITE IKM, CEISA KITE IKM, CEISA 4.0)
      (1) Evaluating and improving the data integration of CEISA KITE IKM with CEISA 4.0.
      (2) KITE IKM companies need to be provided with back up data, to anticipate "Force Majeur" data loss. Because until now KITE IKM companies only have access to one device, so if the device is damaged or the HR authorized for the access suddenly resigns, the company's data will be lost or cannot be accessed.
      (3) It is necessary to provide the KITE IKM module for training/demo by officials, so that officials can more easily understand when providing assistance to KITE IKM companies.

   b. Regarding Human Resources (HR)
      It is necessary to increase import/export/other knowledge for KITE IKM companies, not only to minimize various procedural errors but also more importantly to do internal strengthening towards independent and more confident KITE IKM companies. Increasing this knowledge can be done by:
      (1) Conduct socialization/assistance periodically to update KITE IKM Company HR knowledge of new provisions or procedures related to customs and traffic rules.
      (2) Carrying out synergy/cooperation in improving the competence of KITE IKM Company HR with academics, for example STAN, in the form of a mentoring program. This assistance can come from various disciplines, such as export and import activities, filling out PIB/PEB, company administration/bookkeeping and accounting for financial reports.

3. Further Research
   Recommendations for further research are about how the KITE IKM Facility is perceived from the side of IKMs that have not yet joined the KITE IKM companies. Is it due to limited information, so that they do not get a clear and correct picture of the KITE IKM Facilities or indeed the KITE IKM facilities are not yet promising for most IKMs.

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THE EFFECT OF *GAME EVALUATION* ON STUDY BOREDOM IN E-LEARNING ON BASIC IMPORTED GOODS INSPECTION

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ABSTRACT

This academic study aims to (1) review the phenomenon of *learning burnout* in E-learning students/participants of Basic Imported Goods Inspection (PBI Basic) Batch IV at the Customs and Excise Education and Training Center; (2) provide *Game Evaluation* recommendations to overcome *learning burnout* in students/participants, and (3) identify the factors that cause *game evaluation* to reduce *learning burnout.* This academic study uses a descriptive qualitative analysis method with a correlation testing and a simple linear regression analysis approach. Data collection techniques were carried out using interviews, questionnaires, and literature study of BPPK Head Regulation Number PER-2/PP/2019 concerning Guidelines for E-learning within the Ministry of Finance dated June 27, 2019. Validity and Reliability tests were carried out by the researcher to obtain a good degree of accuracy between the data that actually occurs on the object and the data collected. The game evaluation application used in this study is the wordwall.net application.

Based on the data obtained by the researcher, the phenomenon of *learning burnout* occurs in the students/participants at the Customs Education and Training Center with a total of 14%. However, the majority of respondents, 118 people, stated that the duration of the training was not boring (86%). *Game evaluation* has an effect on *learning burnout* with the degree of correlation is 0.311 (sufficient correlation). It is based on the testing of simple linear regression and the result is that the *Game Evaluation* variable (X) influences the learning boredom variable (Y). It can be concluded that this is in line with the initial hypothesis which states "*Game Evaluation* has an effect in reducing students/participants' *learning burnout* in Basic Imported Goods Inspection E-learning". Factors that state *game evaluation* can reduce learning boredom are (1) the application is made very interactive; (2) easier processing of evaluation data from learning outcomes; (3) the application is made very interesting; (4) ability to learn again because *game evaluation* immediately gives an answer when choosing the wrong answer; (5) game evaluation can be an ice breaker when understanding the material; (6) the learning media becomes more varied.

Researcher suggests that *Game Evaluation* can be applied to other training, not only to Basic PBI E-learning. Besides that, the participants hope that the game evaluation would be more interesting with a variety of answer choices. Future researchers can use other applications in implementing *game evaluation* besides the wordwall application. Future researchers can also examine other impacts apart from reducing boredom, *game* applications can have other implications such as learning achievement or student learning interest.

A. Introduction

Covid-19 or *coronavirus disease* 2019 is an infectious disease from a virus that first appeared in Wuhan, China at the end of 2019. This epidemic continues to claim lives around the world, including Indonesia. Based on data that has been obtained cumulatively as of March 28, 2022, the number of positive patients affected by the corona virus outbreak in Indonesia is recorded at 5,995,876 (Indonesian Ministry of Health, 2021).

The world of education at the Ministry of Finance has also been affected by the Covid-19 pandemic. One of them is the cancellation of all classical training plans at the Customs and Excise Education and Training Center. This is in accordance with the government's appeal to all Indonesian people to work and study from home during the pandemic to minimize the risk of spreading Covid-19.

Prior to the Covid-19 pandemic, which has been going on since March 2020 in Indonesia, the Financial Education and Training Agency (BPPK) had created guidelines for implementing online learning. BPPK intends to adopt modern learning as the main tool in developing the Ministry of Finance's human resources. This regulation is mentioned in BPPK head regulation Number PER-2/PP/2019 concerning Guidelines for E-learning within the Ministry of Finance dated June 27, 2019.

Based on the regulations above, the E-learning learning process is carried out through the Ministry of Finance Learning Center which hereinafter is abbreviated as KLC. KLC is a learning portal managed by the Financial Education and Training Agency. In making training through KLC, there is interaction between departments in the training center so that the training is complete. Starting from the department of Education and Training Planning and Development, to the Implementation department, and to the Performance Evaluation and Reporting department. There is also a discussion forum between the teachers and students/participants to dig deeper into materials that are not clear. Below is the flow of implementing the guidelines of *E-learning*.

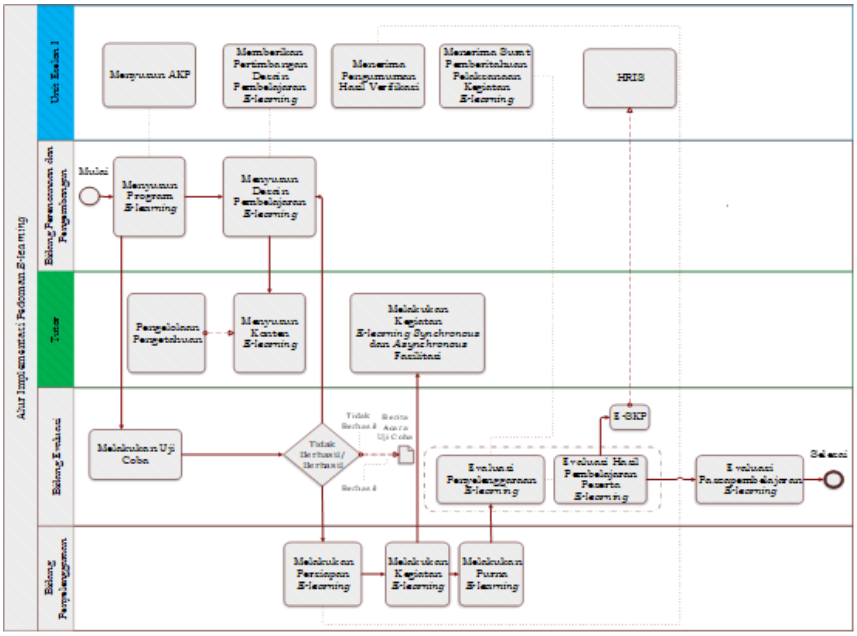
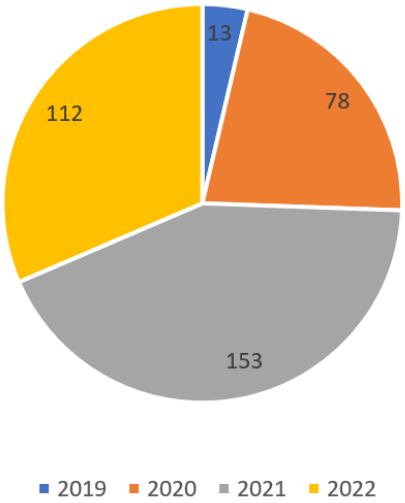


Figure of Flowchart for Implementation of E-learning Guidelines

Currently the learning process at the Customs and Excise Education and Training Center is adapted to be carried out at home through online learning in the form of E-learning, as many as 78 E-learning in 2020. This number increased drastically to close to 200% in 2021, namely 153 E-learning have been organized by the Customs and Excise Education and Training Center during the pandemic in the 2021 fiscal year. This digital learning transformation is in line with the Minister of Finance's policy regarding the Implementation of the Ministry of Finance's Bureaucratic Reform and Institutional Transformation Strategic Initiative (IS RBTK) which expects the proportion of E-learning implementation to reach 70% of the total BPPK training for a year.



Graph of the Number of E-learning carried out by the Customs and Excise Education and Training Center

E-learning on Basic Imported Goods Inspection (PBI) is one of the E-learning carried out by the Customs and Excise Education and Training Center. This training is carried out for 11 working days. During the training, the students/participants are required to take part in the training by only staring at the screen of their cellphone or laptop. The participants cannot interact with their teacher or classmates. There are no face-to-face sessions with the instructors/classmates during the training. Because it is online, sometimes participants get additional office assignments while attending the training.

The problem of *learning burnout* or learning boredom is also widely felt by the participants/students when doing online learning.This is based on a survey conducted by the Chairperson of the IPNU East Java PW and the team, Choirul Muntadiin. He stated that there were 88.75 percent of respondents who considered the current online teaching and learning activity system (KBM) to be dull, boring and stressful (Kompas.com, 2020)

Based on the training which was conducted in full online, as well as the relatively long duration of the training (11 working days), it is possible that the phenomenon of learning burnout will occur in participants during the learning/training process. This is proven by the researcher conducting short interviews with 8 alumni of Basic PBI E-learning Batch 1. Five out of the eight participants stated that they were bored with the learning while attending the training.

Table of the short interview respondents

No	Name	Work unit	Information
1	Ahadan Kahf	Directorate of Customs and Excise Audit	Bored
2	Annisa Anindita, A.Md.	DJBC Secretariat	Bored
3	Amat Nasrudin, SE	KPPBC TMP A Tangerang	Bored
4	Andrean Julio Firmansyah	KPUBC Type A Tanjung Priok	Bored
5	Arif Ismayana	Directorate of Enforcement and Investigation	Bored
6	Arief Rahmanda, A.Md.	KPPBC TMP C Bengkalis	Not
7	Ardhiansyah Fuad Asrurrosyid	KPPBC TMP Tanjung Emas	Not
8	Amin Gemayel Djafar	KanWil. DJBC East Java II	Not

Related to the phenomenon of learning boredom that occurs in the training participants, it is necessary to have some efforts to overcome the problem of learning boredom, and one of them can be using games. According to Hakim (2004) one way to prevent and overcome learning boredom is to do recreational or entertainment activities.

Research that has been conducted on efforts to reduce the level of learning boredom through games by M. Ilham Mubarok (2018) with the title "Efforts to Reduce Learning Boredom through Game Techniques Group Guidance for Class XI Accounting Students at SMK YPKK 2 Sleman",

obtained the result that game techniques can reduce students' learning boredom.

Based on the description above, the researcher will examine whether there is influence/relationship of Game Evaluation on the learning burnout phenomenon in the participants of Basic PBI E-learning at the Customs and Excise Education and Training Center. Game applications that will be made are applications that use the wordwall.net platform.

B. Theoretical Background

B.1. Literature Review

1. Learning Burnout

a. Definition of Learning Burnout

According to Edi Sutarjo, Dewi Arum WMP, Ni Kt. Suarni (2014) learning burnout or learning boredom is an emotional condition that occurs in someone who has experienced mental and physical boredom as a result of work-related demand to increased learning.

Demerouti et al. (2002) explained that learning boredom is a syndrome of negative experiences in learning, including feelings of fatigue and detachment from learning. Fatigue is defined as a consequence of prolonged physical activity, emotional and cognitive tension, as a result of a particular job (stressor) that is prolonged.

Based on the explanation above, we can understand that learners or students/participants who feel learning burnout do not have harmony between their emotions and thoughts. If individuals have ideas, feelings, perceptions or thoughts that are unbalanced or contradictory, an unpleasant psychological situation will occur.

b. Characteristics of Learning Burnout

According to Hakim (2004) learning boredom has signs or symptoms that are often experienced, namely the emergence of feelings of reluctance, laziness, lethargy and no enthusiasm for learning.

According to Rebert in Muhibbin Syah (2015), the characteristics of learning boredom are:

1) Feeling as if the knowledge and skills gained from the learning process are not progressing. Students who are starting to enter boredom in their learning feel as if the knowledge and skills they have acquired in learning are not increasing, so students feel that their study time is wasted.
2) The intellectual system cannot work as expected in processing information or experience, so it stagnates in its learning progress. A student who is in a state of boredom, his intellectual system cannot work as expected in processing various information received or new experiences he gets.

3) Loss of motivation and consolidation. Students who are in a state of boredom feel that they no longer have motivation that can make them excited to increase their understanding of the lessons they receive or learn.

Based on the explanation of the experts above, the characteristics of learning boredom can be concluded that participants/students feel that their knowledge and skills have not progressed during the learning process, their reasoning system cannot work as expected in processing information or experience, and loss of motivation and consolidation.

c. Factors Causing Learning Burnout

Schaufeli and Enzmann (in Vitasari, 2016: 16) state that the types of learning boredom are as follows:

1) Cognitive fatigue: Instability, loss of hope and meaning in life, fear of being "crazy", feeling of not being able to do something, feeling of failure always haunts, low self-esteem, emergence of suicidal ideation.
2) Loss of motivation: Loss of enthusiasm, loss of idealism, disappointment, boredom and demoralization, students are usually not comfortable in class or participating in learning activities.

According to Slivar (2001), the factors that cause burnout in schools are as follows:

1) There are school demands for students that require achieving good results. With this, students become burdened.
2) There is not enough space for students to move so that the level of creativity that exists in students is limited, and they are reluctant to participate too actively in the learning process.
3) Lack of appreciation given to students. Giving awards and praise on a regular basis will make students be more enthusiastic to do well. Because they feel that the school appreciates their hard work to excel.
4) Lack of interpersonal relationships that exist between students and students, and students with teachers. With this in mind, if there is a problem from one of the students, the problem is difficult to solve because of the lack of communication that exists.
5) The high expectations that parents have for their children, so that students are afraid to fail. In addition, criticism is always made for mistakes made by students and giving unpleasant punishments for the wrong doing. From this, students will continue to feel threatened to be in school.
6) There are different views for students from school, friends, family and the surrounding environment for the learning achievements they have achieved.

Sugihartono et. al. (2013) states that there are two factors that influence learning, namely internal factors and external factors.

1) Internal factors are factors that exist within individuals who are learning. Internal factors include:
   a) Physical factors include health and disability factors; meanwhile
   b) Psychological factors include intelligence, attention, interest, talent, motive, maturity and fatigue.

2) External factors are factors that are outside the individual. External factors that influence learning include family factors, school factors and community factors.

Muhibbin Syah (2015) lists four factors that cause mental fatigue in student learning, namely:

1) Because of students' anxiety about the negative impact caused by fatigue itself;
2) Because of students' anxiety about the standards or benchmarks for success in certain fields of study which are considered too high, especially when these students are bored studying these fields of study;
3) Because the students are in the midst of a tough competitive situation and it demands harder intellectual work;
4) Because students believe in the concept of optimum academic performance, while they themselves assess their own learning only based on the provisions they made themselves.

According to Hakim (2004) the factors that cause learning boredom are:

1) Ways or methods of learning that do not vary.
2) Study only in certain places.
3) Unchanged learning atmosphere.
4) Lack of recreational or entertainment activities.
5) Strong and protracted mental tension during learning.

From the factors above, it is explained that the ways or learning methods that do not vary can cause learning burnout. Therefore, variations or good and fun learning methods can reduce learning burnout in participants.

d. How to Overcome Learning Burnout

According to Muhibbin Syah (2015), the most common cause of boredom is fatigue, because fatigue can be a cause of feelings of boredom in the students concerned. He continued that mental fatigue which causes learning boredom can usually be overcome by using the following tips:

a. Take a break and consume nutritious food and drink in sufficient quantities.
b. Change or reschedule the hours of study days to the time when it is more likely to enable students to study harder.
c. Change or rearrange the student learning environment which includes changing the position of desks, cupboards, bookshelves, learning equipment and so on to enable students to feel they are in a new room that is more pleasant for learning.
d. Provide new motivation and stimulation so that students feel compelled to study harder than before.
e. Students/participants must really act (not give up or stay silent) by trying to learn and learn again.

According to Hakim (2004), efforts that can be made to prevent and overcome learning boredom are as follows:

a. Learn in a variety of ways or methods. If learning activities are carried out using methods that do not change, we will feel bored and fed up. Therefore, do learning activities with a variety of methods.
b. Make physical changes in the study room. Make changes to the location of learning equipment and supplies in order to create new motivation and reduce boredom while studying.
c. Create a new atmosphere in the study room. Try new things while studying, for example, by listening to music or doing other things that can reduce learning fatigue and boredom.
d. Engage in leisure or entertainment activities. One way to prevent and overcome learning burnout is to plan or program recreational activities to be carried out after studying continuously.
e. Avoid any mental tension while studying.

2. Game Evaluation

a. Definition of Game

Over time, learning methods are increasingly developing. Starting from questions and answers, discussions, lectures, solving problems, humans have also begun to look for other alternatives to conservative methods in class. Until the emergence of game-based learning methods or gamefication.

According to Kapp (2012), gamification can be defined as a concept that combines games, aesthetics and the ability to think to attract attention, motivate, promote learning, and solve problems. Meanwhile, according to Gartner (in Burke, 2014), gamification is the utilization of mechanical elements and user experience design of a game, in order to attract and motivate someone digitally to achieve their goals.

b. Game Elements

According to Prambayun and Farozi (2015: 4), there are several elements of gamification that can be applied in learning.

1. Story or Mission

Stories or missions are the most used elements to build engagement; stories can make players understand and feel the situations that occur in a game.

2. *Challenge*

Challenge is special stimulus given to players to further improve their skills or to get special rewards. Challenges can fulfill the principles of interactive, challenging learning strategies and can provide additional motivation for students.

3. *Reward*

The specific principle of learning strategy that greatly influences engagement is motivation. Reward is one way to increase student motivation.

Giving rewards in class will encourage students to increase their efforts in teaching and learning activities and developing learning outcomes.

4. *Point*

Participants are used as feedback from playing a game. With the points, participants will get feedback from the progress of the game.

5. *Leaderboard*

Leaderboard is a social element that is very influential on student motivation. Students will show their existence by trying to be ranked first. In addition, students can also see the progress of their achievements from the efforts that have been made.

6. *Badge*

Badge can be awarded for a player's success in completing a special mission. Badges can also be given when players get certain achievements from the games that have been done. The badge serves as a goal and as a symbol of social status. Having lots of badges will certainly be a matter of pride for some players.

From the explanation above, what is meant by mechanical elements are the key elements such as points, leaderboards, and badges that support the passage of a game.

d. Game as learning media

Ismail (2006) mentions that there are several important functions of educational games, including the following:

1) Providing knowledge to students through the learning process of playing while learning.
2) Stimulating the development of intelligence, creativity, language, in order to foster a good attitude, mentality, and morals.
3) Creating an attractive play environment, providing a sense of security, and fun.
4) Improving the quality of student learning.

According to Ismail (2006), games in learning are also interpreted as an activity that is very fun and is an educational method or tool that is educational. In learning games there is a combination of several elements such as attractive graphics, various animations, text, audio and video which can stimulate students' interests in receiving the subject matter presented (Wijayanto & Istianah, 2017).

e. Game Evaluation

According to experts, game evaluation is an effective organization of learning activities through the implementation of games that have been planned (Werbach, K. Gamificación, 2014). Game evaluation adopts the principle of learning that is a game (gamification), namely making the evaluation of the material in the curriculum of a training by incorporating the characteristics of games.

From some of the explanations above, the evaluation game meant by the researcher is to make an evaluation on Basic PBI E-learning materials using game mechanics, so that the evaluation can be modified into a game. Evaluations are made to be more interesting and not boring.

f. Evaluation of Learning Media

According to Leacock and Nesbit (2007), the Learning Object Review Instrument (LORI) has aspects that underlie a learning multimedia assessment, namely:

1) Aspects of Content Quality
2) Learning Objectives (Learning Goal Alignment)
3) Feedback and Adjustments (Feedback and adaptation)
4) Motivation
5) Presentation Design
6) Interaction Usability
7) Accessibility
8) Reusability
9) Compliance Standards

According to Wahono (2006), there are three aspects of learning media assessment, namely:

1) Software Engineering Aspect

The software engineering aspect consists of 9 aspects, namely (1) effective and efficient, (2) reliable, (3) maintainable (can be managed easily), (4) usability (easy to use and simple to operate), (5) accuracy of application or software selection, (6) compatibility (can be installed or run on several existing hardware and software), (7) integrated and easy media packaging, (8) complete program documentation including: installation instructions (clear, brief, complete), troubleshooting (clear, structured, and anticipatory), program design (clear, describing program workflow), and (9) reusability.

2) Learning Design Aspect

This aspect of learning design consists of 16 aspects, namely (1) clarity of learning objectives, (2) relevance of learning objectives to SK/KD/Curriculum, (3) scope and depth of learning objectives, (4) accuracy of using learning strategies, (5) interactivity, (6) providing learning motivation, (7) contextuality and actuality, (8) completeness and quality of learning aid materials, (9) suitability of material with learning objectives, (10) depth of material, (11) ease of understanding, (12) systematic, (13) clarity of description, discussion, examples, simulations, and exercises, (14) consistency of evaluation with learning objectives, (15) accuracy of evaluation tools, and (16) giving feedback.

3) Visual Communication Aspect

This aspect of visual communication consists of 7 aspects, namely (1) communicative (in accordance with the message and acceptable or in line with wishes), (2) creative in ideas and conveying ideas, (3) simple and engaging, (4) audio (narration, sound effects, backsound, and music), (5)

visual (layout design, typography and color), (6) animated media (animation, movies), and (7) interactive layout (navigation icons).

3. Wordwall.net application

Wordwall is an application that can be played with several players simultaneously. Wordwall can be accessed via wordwall.net so that it can be used by online training participants. Benedict Kasa, et. al. (2021) said that this wordwall is very suitable for use in building interactive learning because students can work on quizzes simultaneously with friends so that the ranking they get in answering the quiz can be known. This platform can create interactive learning activities with the help of technology connected to the internet. The Wordwall.net platform has the following advantages and disadvantages:

1) Advantages
   a) More varied features
   b) Easy access
   c) Student assignment results are sent to the teacher automatically
   d) Student answer formats can be downloaded in pdf format
   e) Printable
2) Disadvantages
   a) Requires a good and strong internet network connection
   b) Paid for more complete feature upgrades

There are variations of games available according to the site www.wordwall.net, quizes of the following types: Crossword, Random Wheel, True or False, Missing Word, Random cards, Find the Match, Match up, Whack-a-mole, Group short, Hangman, Anagram, Open the Box, Wordsearch, Ballon pop, Unjumble, Labeled diagram, and Gameshow Quiz.

B.2. Previous Research

There have been several studies related to consignment items that have been carried out, including:

Researcher Name	Research Title	Analysis Method	Analysis of Results Analysis
Anastasia Ratnawati Biromo, et. al. (2021)	Prevention of burnout in online learning activities in student environments	Observation with counseling, pretest, post test, and question and answer to respondents	Counseling about mental health during online learning is a form of adding insights into burnout and how to deal with it. With an increase in the participants' knowledge of 13.8%, the counseling participants gained insights regarding burnout and how to deal with it as well as mental

Researcher Name	Research Title	Analysis Method	Analysis of Results Analysis
			health during online learning
Ita Fitriati, et. al. (2021)	Implementation of digital game-based learning using the educandy application for evaluation and motivation of Bima students	Quantitative descriptive	1. Learning using a digital game approach is considered more effective in evaluating and motivating students/participants in acquiring knowledge than using a non-game application approach. 2. Data analysis of the results of the questionnaires on learning motivation through 7 indicators given to 78 students/participants obtained an average of 88.06% in the High category
Ainun Nuzula Ar-Rahmah (2021)	Development of Educational Game-Based Learning Evaluation Using the Wordwall.Net Platform for Fifth Grade Students at SDIT Al-Mishbah Sumobito, Jombang	Research and Development (R&D)	Educative *Game* using the wordwall.net platform in science subjects can provide solutions to existing evaluation problems with an average N-gain test result of 0.6 (medium category)
M. Ilham Mubarok (2018)	Efforts to Reduce Learning Boredom through Game Technique Group Guidance for Class XI Accounting Students of SMK YPKK 2 Sleman.	Classroom Action Research, Actions and Observations conducted by Games on this action is called Out Of The Box.	Game technique group guidance can reduce student learning boredom. Before classroom action, the students' learning boredom score was 128.75; The first cycle of students' learning boredom fell to 111.67;

Researcher Name	Research Title	Analysis Method	Analysis of Results Analysis
			The second cycle of students' learning boredom fell again to 96.71 and was classified in the low category.

B.3. Research Hypothesis

Based on the problems and literature review above, the following hypothesis is formulated: "Game Evaluation has an effect on reducing learning burnout of the students/participants in E-learning on Basic Imported Goods Inspection".

C. Research methods

The research approach used in this academic study was a quantitative research approach with a correlation method. This study wanted to examine the effect of the game evaluation variable (X) on the learning boredom variable (Y).

C.1 Subject, Place and Time of Research

The subjects in this classroom action research were the participants who had attended and passed the Basic PBI E-learning Batch 4 accounting for 155 people. The location of this research was conducted at the Customs and Excise Education and Training Center, Jalan Bojana Tirta III Rawamangun, East Jakarta, DKI Jakarta. The time of the research was carried out from July to October 2022

C.2. Data collection technique

The data collection technique used in this academic study was a descriptive method with a quantitative approach. According to Sugiyono (2017), the quantitative approach descriptive method is a research method based on the philosophy of positivism, used to examine certain populations or samples, collecting data using research instruments, data analysis is quantitative/statistical in nature, with the aim of testing established hypotheses.

The data collection technique used by researchers was the distribution of questionnaires which would be filled out by all participants of Basic PBI E-learning Batch IV. Questionnaires distribution was carried out online through the Google form application. In addition, the researcher also conducted interviews with the population selected as the sample.

C.3. Research variable

The research variable according to Sugiyono (2017) is a matter in whatever form is determined by the researcher to be studied so that information is obtained about it, and then a conclusion is drawn. In this academic study, the reviewer used two variables, namely:

1. Independent variable. According to Sugiyono (2017), the independent variable is the variable that influences or causes the change or the emergence of the dependent variable. The independent variable in this academic study is the levels in *Game Evaluation* which is represented by the symbol (X).
2. Dependent variables. According to Sugiyono (2017), they are variables that are affected or become a result because of the independent variables. Dependent variables in this academic study are the levels of learning burnout in students which are given the symbol

(Y). So the relationship between these variables can be described as follows

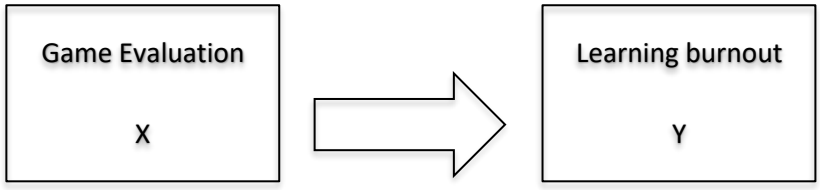


Figure 3.1. Relationship between variables

C.3. Scale Measurement

According to Sugiyono (2017), the Likert scale is used to measure attitudes, opinions, and perceptions of a person or a group of people about social phenomena. The measurements using the Likert scale method for each answer are:

1. Category strongly agree with a score of 5
2. Agree category with a score of 4
3. Doubtful/neutral category with a score of 3
4. Disagree category with a score of 2
5. Category strongly disagree with a score of 1

In this assessment, the highest rating according to the Likert scale is (5) and the lowest score is (1). The scores shown applied to all items of the questionnaire questions that were circulated.

This Likert scale then scales the individual concerned by giving the weight of the selected answer. The average value of each respondent can be grouped into class intervals with the number of classes = 5, so the interval can be calculated as follows:

$$\text{intervals} = \frac{\text{Maximum value - minimum value}}{\text{Number of classes}}$$

$$\text{intervals} = \frac{5\text{-}1}{5} = 0.8$$

From the results of the above information, it can be determined the distribution scale of the respondent's criteria as follows:

a. Value of 1.00 to 1.79 = strongly disagree
b. Value of 1.80 to 2.59 = disagree
c. Value of 2.60 to 3.39 = neutral
d. Value of 3.40 to 4.19 = agree
e. Value of 4.20 to 5.00 = strongly agree

Responses that tend to strongly agree indicate a high level of job satisfaction. And conversely, responses that tend to strongly disagree indicate a low level of satisfaction.

C.4. Validity and Reliability Test

Sugiyono (2017) states that the validity test shows the degree of accuracy between the data that actually occurs on the object and the data collected by the researcher. He continues that to test the validity of the content, opinions from experts (judgment experts) can be used. Validity relates to the determination of the assessment tool for the concept being assessed so that it really assesses what should be assessed (Sudjana, 2016).

The validity test was carried out on 25 samples of respondents outside the E-learning Inspection of Basic Imported Goods Batch IV. The test results were carried out on 45 statement items on the Game Evaluation and Learning Burnout variables. After testing the validity, there were 7 questions that were not valid, so that only 38 questions were used.

Table of Instrument Items

Items	Statements
1	I get bored with the amount of material being taught
2	I get bored when learning is done independently
3	I am not enthusiastic while participating in E-learning for a long time
4	I am not interested in participating in this E-learning because of the large amount of material
5	I feel bored when I stare at a computer screen for a long time
6	I get tired easily when I try to understand explanations through videos
7	I'm afraid I can't answer the questions properly
8	I am worried if there is a difficult exam in this E-learning
9	I feel unable to complete E-learning on time
10	I'm worried about not passing E-learning
11	I'm worried that I can't understand all the E-learning material properly
12	I get bored when the exam material is monotonous
13	I get bored easily if the training is full E-learning
14	I am happy with the game evaluation
15	Game Evaluation's attractive appearance keeps me from getting bored learning
16	I am bored if there are no discussion partners with fellow participants during E-learning
17	Interactive *Game Evaluation* makes me excited to learn
18	Game Evaluation's audio and design make me happy to participate in E-learning
19	With a different atmosphere, I experienced a decrease in learning boredom after using game evaluation
20	I feel that the material taught in E-learning has not changed the way I work
21	I'm not sure that I will graduate with a very satisfactory predicate in this E-learning
22	I feel that I am not ready to discuss with my friends regarding inspection of basic imported goods
23	I understand the material better with game evaluation
24	Understanding the material with Game Evaluation makes me confident in discussing with colleagues
25	*Game Evaluation* uses the appropriate font size
26	*Game Evaluation* uses an easy-to-read font format

Items	Statements
27	*Game Evaluation* uses a good font color
28	*Game Evaluation* uses the appropriate image
29	*Game Evaluation* has good image quality
30	Game Evaluation's sound effects could be heard clearly
31	Game Evaluation's sound effects match the animations displayed
32	*Game Evaluation* has good animation
33	*Game Evaluation* has good harmony between animation with the next animation
34	Game Evaluation's animation duration is good enough
35	Game Evaluation's color combination is good
36	Game Evaluation's color contrast is appropriate
37	Availability of Game Evaluation navigation is good
38	Game Evaluation's navigation is easy to understand and use
39	Consistent placement of the Game Evaluation button
40	*Game Evaluation* is easily run through a laptop or computer
41	*Game Evaluation* is easy to use via mobile
42	*Game Evaluation* is easy to run across browsers
43	The instructions for using Game Evaluation are easy to understand
44	Game Evaluation registration instructions are easy to understand
45	The help instructions in Game Evaluation are easy to understand

Table of Instruments that do not need to be used

Items	Statements
2	I get bored when learning is done independently
6	I get tired easily when I try to understand explanations through videos
12	I get bored when the exam material is monotonous
13	I get bored easily if the training is full E-learning
20	I feel that the material taught in E-learning has not changed the way I work
21	I'm not sure that I will graduate with a very satisfactory predicate in this E-learning
22	I feel that I am not ready to discuss with my friends regarding inspection of basic imported goods

According to Sugiyono (2017: 130), the reliability test is the extent to which measurement results using the same object will produce the same data. This reliability test was carried out on 25 respondents as the training participants, using questions that had been declared valid in the validity test and their reliability would be determined.

Based on the results of the reliability test above, the value of Cronbach's Alpha was 0.958. The Cronbach's alpha value is more (>) than 0.6, so it is considered reliable. Observe the table below:

Table 3.1. Reliability test results

Reliability Statistics

Cronbach's Alpha	N of Items
.958	38

C.5. Data Analysis Techniques

Quantitative data analysis techniques according to Sugiyono (2017) are activities after data from all respondents (population/sample) are collected. Activities in data analysis are grouping data based on variables and types of respondents, tabulating data based on variables from all respondents, presenting data for each variable studied, performing calculations to answer the problem formulation, and performing calculations to test the hypotheses that have been proposed. Meanwhile, according to Sanjaya (2015), in quantitative research that relies on data in the form of values and numbers, data analysis is carried out using statistics. For quantitative (numerical) research, of course the data analysis used is quantitative analysis with statistical measures.

1. Descriptive statistics

According to Sugiyono (2017), descriptive statistics are statistics that are used to analyze data by describing or describing the data that has been collected as it is without intending to make general conclusions. Descriptive statistics are used to analyze and present quantitative data with the aim of knowing the description of the research data. By using descriptive statistics, the average value (mean), standard deviation, variance, maximum, minimum can be found (Ghozali, 2018).

2. Normality Testing

The normality test is to find out whether the research data follow a normal distribution or not. The technique used for normality testing uses the Kolmogorov Smirnov test. The rule used is if $p > 0.05$ then the distribution is normal, and vice versa if $p \leq 0.05$ then the distribution is not normal.

3. Correlation Testing

Correlation testing is used to determine the level of closeness of the relationship between variables which is expressed by the correlation coefficient (r). The types of relationship between X and Y variables can be positive and negative. The technique used for correlation testing uses the Pearson test. The rule used is that if the significance value is <0.05 then the X variable correlates to the Y variable.

4. Simple Linear Regression Testing

Simple Linear Regression is a statistical method that functions to test the extent of a causal relationship between the Causal Factor Variable (X) and the Consequent Variable. Linear regression testing is used to test the effect of one independent variable on the related variables.The rule used is if the Significance value is <0.05, then variable X has an effect on variable Y. Vice versa, if the Significance value is > 0.05, then variable X has no effect on variable Y

D. Analysis and Discussion

D.1. Research result

1. *Response Rate*

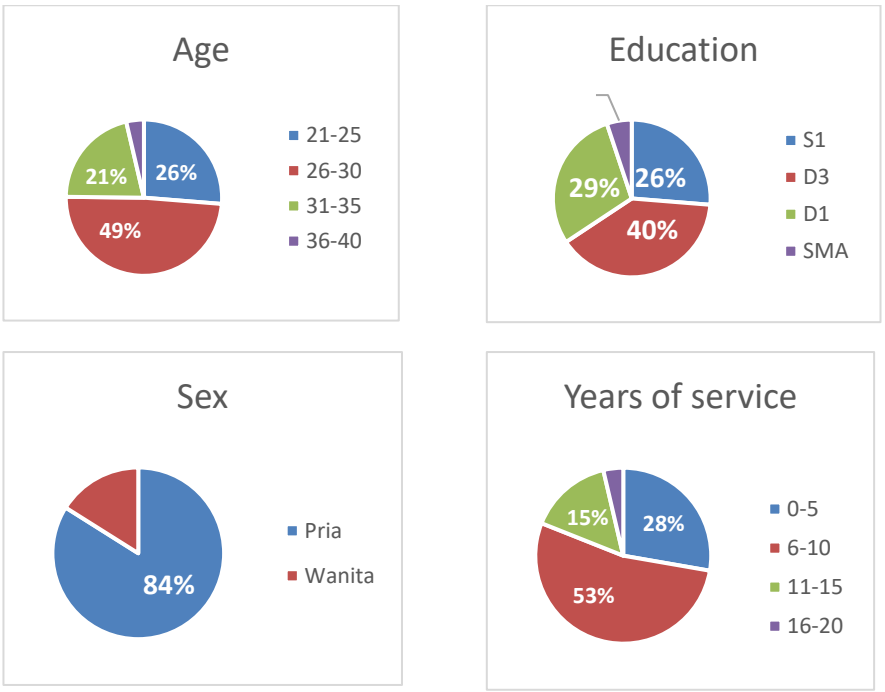
Table 4.1. Response Rate

1	Respondents	155
2	Not filling in	18
3	Filling in	137
4	Response rate	**88.39%**

Based on the table above, it is known that the number of questionnaires distributed to the participants of *E-learning* on Inspection of Basic Imported Goods is as many as 155 questionnaires, participants who filled in and were valid to be sampled are as many as 137 questionnaires with a response rate of 88.39%

2. Characteristics of Respondents

The characteristics of the respondents that will be described are age, education, sex and years of service. Presentation of the data on the characteristics of respondents aims to recognize the special characteristics of respondents so that it makes it easier to carry out analysis.



Respondent Criteria Image

3. Normality Testing

The normality test is to find out whether the research data follows a normal distribution or not. The way to find out is:

1) If the significance value (Sig.) > 0.05 then the research data is normally distributed
2) If the significance value (Sig < 0.05, the research data is not normally distributed

Table of normality test results

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residuals
N		137
Normal Parameters, b	Means	.0000000
	std. Deviation	8.00787697
Most Extreme Differences	absolute	072
	Positive	.066
	Negative	-.072
Kolmogorov-Smirnov Z		.838
asymp. Sig. (2-tailed)		.484

a. Test distribution is Normal.
b. Calculated from data.

Based on the results of the normality test above, it is known that the significance value is 0.484 > 0.05; it can be concluded that the residual values are normally distributed.

4. Pearson Correlation Testing

Correlation testing is used to determine the level of closeness of the relationship between variables which is expressed by the correlation coefficient (r). The types of relationship between X and Y variables can be positive and negative. The way to find out is:

1) If the Significance value is <0.05, then variable X is correlated with variable Y
2) If the Significance value is > 0.05, then variable X is not correlated with variable Y

Whereas, interval categorization of the strength of the correlation relationship according to Jonathan Sarwono (Sarwono, 2006) is:

1) 0 : No correlation
2) 0.00 - 0.25 : very weak correlation
3) 0.25 - 0.50 : enough correlation
4) 0.50 - 0.75 : strong correlation
5) 0.75 - 0.99 : very strong correlation
6) 1: perfect correlation

Table 4.2. Pearson correlation test results

Correlations

		Game Evaluation	Learning Burnout
Game Evaluation	Pearson Correlation	1	.311**
	Sig. (2-tailed)		.000
	N	137	137
Learning Burnout	Pearson Correlation	.311**	1
	Sig. (2-tailed)	.000	
	N	137	137

**. Correlation is significant at the 0.01 level (2-tailed).

Based on the results above, it is known that the significance value is 0.00 <0.05, so it can be concluded that the Game Evaluation variable (X) correlates with the learning boredom variable (Y). The Pearson correlation value is 0.311 > rtable 0.159, which also means that the Game Evaluation variable (X) correlates with the learning boredom variable (Y). While the degree of correlation is 0.311 (sufficient correlation).

5. Simple Linear Regression Testing

Simple Linear Regression is a statistical method that functions to test the extent of a causal relationship between the Causal Factor Variable (X) and the Consequent Variable. Linear regression testing is used to test the effect of one independent variable on the related variables.The way to find out is:

1) If the Significance value is <0.05, then variable X affects variable Y
2) If the Significance value is > 0.05, then variable X has no effect on variable Y

Table of results of linear regression test

ANOVA[a]

Model		Sum of Squares	df	MeanSquare	F	Sig.
1	Regression	936,968	1	936,968	14,504	.000[b]
	Residual	8721.149	135	64,601		
	Total	9658.117	136			

a. Dependent Variable: Learning Burnout
b. Predictors: (Constant), Game Evaluation

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	std. Error	Betas		
1	(Constant)	38,625	4,593		8,410	.000
	Game Evaluation	.196	051	.311	3,808	.000

a. Dependent Variable: Learning Burnout

Based on the results above, it is known that the significance value is 0.00 <0.05, so it can be concluded that the Game Evaluation variable (X) has an effect on the learning boredom variable (Y).

Based on the t value: it is known that the t_{count} value is 3.808 > t_{table} 1.978, so it can be concluded that the Game Evaluation variable (X) has an effect on the learning saturation variable (Y).

D.2. Discussion of the Research Results

This research was conducted at the Customs and Excise Education and Training Center in a period of July to October 2022. The population of this study was the participants/students of Basic Imported Goods Inspection E-learning Batch IV. The purpose of this research is to see whether *game evaluation* can overcome learning burnout in the students/participants, and is there a correlation and influence relationship between *game evaluation* with learning burnout. Before the researcher conducted the research, the researcher first tested the validity and reliability of the 25 respondents outside the specified population using a questionnaire that would be used in this study. After the validity and reliability tests were carried out, a research instrument was obtained that met the requirements.

Response rate, from 155 sample respondents, 137 people gave a complete response (88.39%). The average age of the respondents was between 21-30 years old. It can be concluded that the majority of E-learning participants are young employees. This explains that the respondents are familiar with learning technology or online applications. As stated in the Generation Theory proposed by Codrington, et. al. (2004) that Generation Z (born 1995-2010) is a digital generation who are proficient and accustomed to information technology and various digital applications.

There were 19 respondents who stated that the long duration of e-learning made participants feel bored. While the remaining 118 respondents thought that the long duration of e-learning was not boring. This showed that even though the duration of e-learning was 11 working days, it did not cause the majority of participants to experience learning boredom. Besides that, the scorm material provided by the Customs and Excise Education and Training Center did not make the participants bored, either. Coupled with the implemented curriculum schedule (maximum 3 hours of training per day) in accordance with BPPK Head Regulation Number PER-2/PP/2019 concerning Guidelines for E-learning within the Ministry of Finance. This is proven by the result of 86% of the participants not experiencing learning burnout.

There were 124 respondents (91%) who stated that Game Evaluation could reduce boredom in studying E-learning Basic Import Goods Inspection. This research proves that *game evaluation* can reduce learning burnout in the students/participants. This is in accordance with the opinion of Hakim (2004) that one way to prevent and overcome learning boredom is to do recreational or entertainment activities. This research is also in line with the results of previous research by M. Ilham Mubarok (2018) which stated that game techniques can reduce students' learning boredom.

Furthermore, there were 105 respondents who stated that Game Evaluation can reduce boredom. Respondents stated that the game evaluation application that uses the wordwall.net platform is an effective game, especially with the function of giving the correct answers when choosing the wrong ones. This is in accordance with the opinion of Werbach, K. Gamificación (2014) that game evaluation is an effective organization of learning activities through the implementation of planned games.

There are interview results from respondents who stated that the wordwall.net application is an interesting application and can be an ice breaker in understanding the material. Besides that, the results of the questionnaire showed that the average wordwall.net application rating was 4.21 out of a scale of 5 (agree).

Furthermore, there are several factors that the researcher obtained from respondents who stated that game evaluation can reduce learning boredom, namely (1) applications that are made very interactive; (2) facilitate processing of evaluation data from learning outcomes; (3) the application is made very interesting; (4) can learn again because game evaluation immediately gives an answer when choosing the wrong one; (5) game evaluation can be an ice breaker when understanding the material; (6) learning media become more varied. This is in line with the opinion of Wijayanto & Istianah (2017) which states that learning games can stimulate students' interests in receiving the subject matter presented.

The researcher also did the testing of simple linear regression and the result is that the Game Evaluation variable (X) influences the learning boredom variable (Y). *Game evaluation* correlates against learning burnout with the degree of correlation is 0.311 (sufficient correlation). Furthermore, the researcher also conducted a simple linear regression test and obtained a significance value of 0.00 <0.05, so it can be concluded that the Game Evaluation variable (X) has an effect on the learning boredom variable (Y). Therefore, it can be concluded that this is in line with the initial hypothesis which states "Game Evaluation has an effect on reducing the students/participants' learning burnout in Basic Imported Goods Inspection E-learning"

E. Conclusions and Recommendations

E. 1. Conclusion

1. The phenomenon of learning burnout occurs in the students/participants of the Customs Education and Training Center with the total of 14%. However, the majority of respondents118 people stated that the duration of the training was not boring (86%).
2. *Game evaluation* affects on learning burnout with the degree of correlation is 0.311 (sufficient correlation). It is based on the testing of simple linear regression and the result is that the Game Evaluation variable (X) influences the learning boredom variable (Y). It can be concluded that this is in line with the initial hypothesis which states "Game Evaluation has an effect on reducing the students/participants' learning burnout in Basic Imported Goods Inspection E-learning".
3. The results of the interviews with the respondents who stated *game evaluation* can reduce learning boredom is:
    a. Applications are made very interactive
    b. Facilitate processing of evaluation data from learning outcomes
    c. The application made is very interesting
    d. Can learn again because Game Evaluation immediately gives an answer when you choose the wrong one

e. *Game Evaluation* can be an ice breaker when understanding the material
f. Learning media become more varied

E. 2. Recommendations

There are several suggestions for improving Game Evaluation on Basic Imported Goods Inspection E-learning as follows:

1. For Customs and Excise Education and Training Center (operational advice)
   a. *Game Evaluation* should be made even more interesting.
   b. The design of the answer choices could be further improved and lead to more types of items.
   c. For chemical materials, examples of answer choices can also be in the form of test tubes, or types of chemicals and tools in general.
   d. *Game Evaluation* should be applied to other training.
2. For future researchers (academic suggestions)
   a. Future researchers can re-examine whether the learning evaluation that has been made can actually reduce the learning boredom of the training participants.
   b. Future researchers can use other applications in implementing game evaluation besides the wordwall application.
   c. Further researchers can develop this research. Game applications not only reduce boredom, but can have other implications such as learning achievement or students' interests in learning.

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PROTOTYPE DESIGN OF WORKFLOW MANAGEMENT SYSTEM BASED ON ENTERPRISE RESOURCE PLANNING (ERP) IN LEARNING DESIGN DEVELOPMENT ACTIVITIES AT CUSTOMS AND EXCISE EDUCATION AND TRAINING CENTER

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ABSTRACT

Skills in managing a job (project management) are important for an instructional designer to have, in addition to conceptual knowledge related to the preparation of learning designs. By using the design science research methodology (DSRM), this study produces a technological artifact in the form of a prototype for implementing an ERP-based workflow management system (Wfms) as an instructional designer's tool in managing the preparation and development of learning designs at the Customs and Excise Education and Training Center. Aside from being a proof of concept for implementing ERP in the preparation and development of learning designs, this prototype can also be used as a tool to assist the learning quality assurance process at BPPK. The results of this study indicate that the ERP-based Wfms has features that can be developed to overcome problems in the preparation of learning designs. In addition, the results of this study conclude that the use of an ERP system can be considered to be applied to other business processes at the Customs and Excise Education and Training Center.

Keywords: learning design, workflow management system, ERP, prototype, customs and excise.

A. Introduction

The Financial Education and Training Agency is an organizational unit at the Ministry of Finance of the Republic of Indonesia which has the task of organizing education, training and competency certification in the field of state finance in accordance with the provisions stipulated in the Presidential Regulation Number 57 of 2020. In addition, BPPK has a mandate to realize one of the Ministry of Finance's strategic initiatives, namely the establishment of the Ministry of Finance's Corporate University and the Ministry of Finance's Learning Organization. This is clearly formulated as the mission of BPPK in its strategic plan (BPPK, 2020).

As one of the vertical units in BPPK, the Customs and Excise Education and Training Center also plays a role in implementing this strategic initiative. The Customs and Excise Education and Training Center plays a role in designing and implementing learning programs in the field of customs and excise. The process of implementing this learning begins with the preparation and development of learning designs. The process of compiling and developing learning designs is an activity carried out at the design and development stage. This activity is carried out based on a framework regulated in BPPK Head Regulation Number PER-4/PJ/2017 concerning Guidelines for Learning Design in the BPPK Environment which adopts the ADDIE model proposed by Watson (1981). Based on these regulations, learning design is a set of learning plans and arrangements that contain goals, objectives, descriptions, subject syllabi and learning methods.

However, the activities of compiling or developing learning designs which become integrated business processes in BPPK business processes as an educational institution has not been fully well documented. There is no system for managing and documenting learning design activities. As a result, activities during the learning design process are not well documented and changes made to instructional design documents during the learning design process cannot be tracked easily. Another problem that occurs is that there is no integration between work flow and document flow, making the time for this learning design process have to be continuously monitored manually to ensure that learning designs can be produced on time. In fact, the accuracy of time as well as the validity and completeness of the documents are aspects that are assessed in the quality assurance process regulated in the Decree of the Head of BPPK Number KEP-97/PP/2018 Concerning Quality Assurance of Learning in the BPPK Environment (BPPK, 2018).

Another impact of the absence of this system is that there is no single source of truth that provides various documents resulting from the learning design development activities. Therefore, users, up to a certain point, find it difficult to track the changes (versioning) that have occurred in these documents. In addition, the documents that must be produced in this learning design process make this learning design process a very administrative process which sometimes actually eliminates its substantive side.

Several previous studies stated that skills in managing projects (project management) are skills that every instructional designer should have, in addition to parahuman in the preparation of learning designs.(Abdous & He, 2008; Williams van Rooij, 2010, 2011). One tool that can be used by

instructional designers for this purpose is project management applications. This application has the main function of creating and documenting tasks, as well as determining and allocating the necessary resources (resource management) to carry out these tasks.

One of the tools that can be used to standardize and integrate workflow and document flow is the workflow management system or Wfms(Aalst & Hee, 2002). One example of a government institution that implements WFMS in its operations is the Directorate General of Taxes (DGT). Based on the experience of implementing WfMS by DGT since 2005, it is known that WfMS provides benefits in the form of standardization of workflow and standardization of output (DGT, 2005). Another benefit offered by WfMS is operational efficiency. WfMS enables automatic and seamless integration of workflows thereby increasing the efficiency of the time needed to complete one workflow (lead time and service time). In fact, the increased level of time efficiency is claimed to reach 83% (Reijers & Aalst, 2005).

One of the ways to implement WFMS is through the use of an enterprise resource planning (ERP) framework (Alashty & Borisovich, 2015; Da-You Liu, et. al., 2005; Li & Fan, 2003b; Zheng-Geng, 2012). ERP is an information system model that enables organizations to automate and integrate their main business processes (Hall, 2011). ERP integrates every party in the company, from vendors, customers, employees to couriers so that it can support the company's main business processes. Supriyono & Sutiah (2021) design and implement the ERP framework in the process of developing ICT-based learning media with the Accelerated SAP method at UIN Maulana Malik Ibrahim Malang. Furthermore, Febiana (2022) also reported that at the same university an internal quality assurance system was also used which was developed using the ERP framework. The use of Wfms managed to score in the good category for product operation aspects, namely correctness, reliability, efficiency, integrity, and usability. Based on these conditions, the reviewers believe that an information system is needed that can integrate work workflow with document workflow to support learning design development activities.

The implementation of this study aims to produce a technological artifact in the form of an ERP-based Wfms implementation design or prototype in the activities of compiling and developing learning designs at the Customs and Excise Education and Training Center.

This prototype will contribute as a proof of concept for implementing ERP-based Wfms in the learning design development activities within BPPK. Apart from being an information system that manages learning design development activities, this system can also be used as an information system tool for the quality assurance process for the preparation and development of learning designs in accordance with the learning quality standards that apply in BPPK.

B. Literature Review

B.1. Learning Design.

The definition of learning design is formulated using various approaches by educational experts. From the perspective of objectives, instructional design is a process for improving the quality of instructional instruction (Gustafson & Branch, 1997). The same thing was also expressed by Keller (2010) which stated that learning design is basically a process and technique to produce effective and efficient learning instructions. Therefore, the essence of learning design is as a guide or guidelines in designing quality learning activities for students.

From the process perspective, learning design is seen as a systematic and reflective process in translating learning and learning principles into the form of plans used as learning materials, learning activities, learning resources, and learning evaluation (Smith & Ragan, 2003). In fact, some experts consider that the learning design process is not only a process for designing learning activities, but also a process for identifying problems regarding HR performance, finding the causes of these problems, considering various alternative solutions, and implementing these solutions into learning activities (Gustafson & Branch, 1997; Richey, et. al., 2011; Rothwel & Kazanas, 2004).

On the other hand, Superman (2014) and Richey, et. al. (2011) define learning design as a branch of science and art. In their opinion, instructional design is the science and art of creating quality instructional systems related to learning activities with the aim of ensuring the creation of quality learning processes and achievement of learning objectives. Furthermore, Gagne, et. al. (2005) emphasized six conceptions of learning design as follows: (1) learning design aims to help individuals learn better, (2) learning design works using a system approach, (3) learning design can be carried out at various levels, (4) learning design is an interactive process that involves the learners, (5) learning design is a process consisting of a number of sub-processes, and (6) the expected differences in learning outcomes also demand differences in learning designs.

The definition of learning design used in this study refers to the Regulation of the Head of the Financial Education and Training Agency Number PER4/PP./2017 (hereinafter referred to as PER-4 of 2017) concerning Instructional Design Guidelines within the Ministry of Finance. This rule regulates the definition of learning design as a set of learning plans and arrangements that contain goals, objectives, descriptions, subject syllabi and learning methods. Furthermore, article 10 of this regulation regulates the output that must be produced from a learning design process at the Ministry of Finance, which includes: (1) KAP, (2) GBPP, (3) SAP or learning scenarios, and (4) KNS.

The activities of compiling and developing learning designs are carried out by a team formed by the Head of the Pusdiklat. This team has members consisting of several elements, namely the section in charge of HR development in the user unit, the planning and learning development section in the Pusdiklat, Widyaiswara, and the skill group owner of the user unit.

Coordination of this team is the responsibility of the section head who is responsible for learning design.

One aspect that is also regulated in this instructional design guideline is the time norm that must be met. For learning programs in the form of training, learning design documents (KAP, GBPP, SAP, or KNS) must be available and distributed to related parties no later than 20 working days for regular PPA results programs. Meanwhile, for the incidental PPA results programs, these documents must be available no later than 5 working days. In addition, as a form of documenting activities, the learning design development team must submit a report to the Head of the Education and Training Center no later than 5 working days prior to the implementation of the lesson.

As with the definition of learning design, the stages of activities in learning design activities are also formulated in several frameworks by educational experts. Several learning design models are used and widely recognized among practitioners in the world of education, for example the Dick & Carey model (Dick, et. al., 1978), the ASSURE model (Smaldino, et. al., 2019), Merril's Principles of Instruction model (Merril, 2012) as well as Gagne's nine events of instructions (Gagne, et. al., 2005), etc. The learning design stages used in this study refer to the ADDIE model (Watson, 1981) where learning design activities are divided into 5 stages, namely analysis, design, development, implementation, and evaluation.

B.2. Workflow management system (Workflow management system)

Workflow management system or WfMS (also referred to as a business process management system) is ideas, methods, techniques, and software used to support structured business processes (Aalst & Hee, 2002). This system is used to support business process execution through automated coordination of a series of activities that are in line with defined business processes. This definition requires that a WFMS must carry out several main functions, namely creating and defining business processes or workflows as well as running and managing these business processes (Hollingsworth, 1995).

Wfms is a device that can be used to automate processes and manual work. With WfMS, the work flow can be done automatically and seamlessly. WfMS also allows users to define and set various parameters according to their needs, such as setting the amount of costs allocated, which parties are involved, how work documents flow, to how long it takes to complete one job (Poola, et. al., 2017; Reijers & Aalst, 2005). In principle, Wfms regulates three main things, namely (1) the process or work performed, (2) the parties involved in the process or work, and (3) the required documents and documents produced from the process or work.

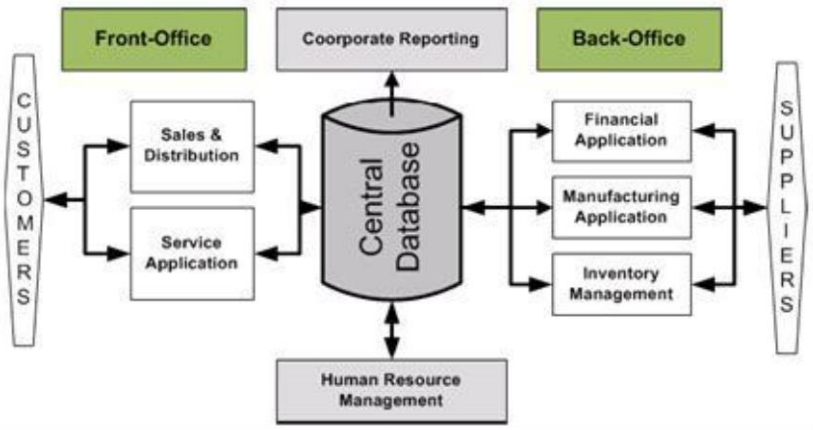
Studies conducted by Reijers & Aalst (2005) during 2001 – 2007 in the Netherlands showed that the implementation of Wfms had a positive impact on companies in the form of lead time and service time efficiencies between 25% to 83%. Another benefit of implementing the Wfms is that there is synchronization between the processes so as to produce a single source of truth, as a control over the quality standards of processes, as well as increasing collaborations between parties involved in a work flow (GRM Information

Management, 2021). In Indonesia, WfMS has been implemented in several public institutions, one of which is the Directorate General of Taxes. Referring to Darono (2010), the implementation of WfMS at DGT has been carried out since 2005 in several (selected) Tax Service Offices. This system is known as CMS (case management system). This system aims to manage work completion in the form of service requests that enter a KPP (which is called a case). The benefits achieved from implementing the WfMS/CMS are (1) standardization of the workflow for handling cases; (2) standardization of legal products/documents; (3) notifications to users when there are cases that must be resolved; (4) supervision for each ongoing or completed case.

B.3. Enterprise Resource Planning (ERP)

According to O'Brien & Maracas (2011) ERP is an enterprise system that includes all functions contained within a company which is driven by several integrated software modules to support the company's internal business processes. Meanwhile, according to Lee, et. al. (2003), ERP is a method for industry in pursuing more efficient business processes by sharing information within and between business processes and conducting business electronically. Besides that, Halls (2011) defines ERP as an information system model that enables an organization to automate and integrate its key business processes. From these definitions, it can be concluded that the key word in the ERP definition is integration. ERP is an information system concept that integrates every party in the company, from vendors, customers, employees to couriers so that it can support the company's main business processes. The ERP system concept is described in Picture1.

Picture1. ERP System Concept



Source: Ganesh, et. al. (2016)

ERP itself is an evolution of material requirement planning (MRP) which was born in the manufacturing world to bridge the integration between user systems and vendor systems to plan the production process and to ensure that raw materials are ordered and available when needed. ERP is also able to integrate other tools such as CRM (Customer Relationship Management), SCM (Supply Chain Management), and so on. By implementing ERP,

companies get seamless data flow between various functions in the company. Therefore, the benefits of ERP are to encourage standardization of business processes, build accurate and reliable databases, and minimize data complexity.

Furthermore, Halls (2011) states that there are four benefits of ERP that can be obtained by companies that implement it, namely (1) improving the quality of internal business processes, (2) cost efficiency, (3) supporting decision making, and (4) providing enterprise agility.

The latest development of ERP is the integration between ERP and WfMS. This integration aims to facilitate ERP customization and implementation. Some ERP vendors even create ERP systems that are workflow-driven so that it is easier for users to implement (Cardoso, et. al., 2004). This ERP-based WfMS is a system that completely defines, executes and manages workflow through a partial system that is triggered automatically through computer commands. WfMS is useful in partially or completely automated business processes where the flow of documents and information moves from one party to another in accordance with specified procedures (Alashty & Borisovich, 2015; Cardoso, et. al., 2004; Li & Fan, 2003a).

At the beginning of its appearance, ERP was indeed used more by the industrial world. However, the process of digital transformation that is happening so fast in the world of education and the competition that is also so tight between educational institutions put demands on educational institutions to carry out business process re-engineered in order to provide fast, accurate and efficient services. In addition to helping integrate various business functions in educational institutions, implementing ERP makes it easy for management to get business-related information quickly and accurately. In addition, ERP also automates the entire academic administration process, from registration to issuance of graduation certificates. ERP also helps educational institutions to allocate the resources they have, such as classrooms and laboratories,

The high demand for educational institutions to implement ERP has made several ERP vendors to provide special modules that can be adopted by educational institutions relatively easily (Shatat & Al Burtamani, 2019). Research found that implementing ERP at one of the Bahraini tertiary institutions could improve the performance of academic staff at that tertiary institution. In addition, ERP can also be used in designing learning instructional designs. Several studies have revealed that designing learning designs, one of the skills that must be possessed by an instructional designer is the expertise in managing work (project management skills), in addition to conceptual knowledge (Abdous & He, 2008; Williams van Rooij, 2010, 2011).

These studies recommend that project management be part of the self-development process for instructional designers, both formally (through education), and non-formally. In addition, as a tool for managing work, project management tools can also be used to assist instructional designers in carrying out their work. ERP has many functions, one of which is related to work flow management. Therefore, ERP can be an alternative in developing tools to help manage work in the process of preparing this learning design.

Apart from educational institutions, ERP has also been widely applied in government institutions. In this sector, the implementation of ERP is driven by community demands for public institutions to have accountability, as well as be transparent and efficient in providing their services to the community. Allen, et. al. (2002) revealed that there are several critical success factors (CSF) in ERP implementation in public institutions. The CSF are divided into 2 categories, namely strategic aspects and technical aspects. Strategic aspects that determine the success of implementing ERP in public institutions are organizational goals and strategies, culture and values adopted in the organization, commitment from leaders, and the current system. The success of ERP implementation in public institutions is also influenced by tactical factors such as the extent of changes to business processes that need to be made, human resource factors, and the available monitoring and feedback systems.

B.4. Previous Research

Several studies that serve as references for the researchers in studying the implementation of Wfms in the preparation of learning designs are presented in the following table.

1. Abdous & He (2008) highlighted the problems experienced in preparing instructional designs in online learning. Inadequate ability in compiling instructional designs coupled with a lack of skills in managing work often make an instructional design project ending up with unsatisfactory results, such as poor quality instructional designs or even delays in implementing a lesson. Therefore, they propose the use of Microsoft Project 2003 to facilitate instructional designers in managing and aligning their work in order to improve the design quality of an online learning program as a whole.
2. The same thing was also expressed by Williams van Rooij (2010). They proposed that training related to project management be given to prospective instructional designers. According to him, these instructional designers are required to have expertise in job management so that work can be completed on time, efficient in terms of cost and time, and meet user's expectations. In their research they also revealed that there is a gap between the required project management skills and the expertise they have.
3. Opinions from Williams van Rooij (2010) were reinforced by the results of their research in the following year. The results of this research indicated that an instructional designer is also required to have the same expertise as a project manager. This means that these two professions both require expertise in managing a project. However, the survey results in this research showed that more than 60% of instructional designers who were respondents admited that their understanding of project management was still low. Therefore, Williams van Rooij (2011) proposed that project management be one of the skills taught to prospective instructional designers in their formal education.
4. Gutte, et. al. (2014) designed an ERP system for college called e-College. The creation of this system was driven by problems that occurred in educational institutions such as poor physical file storage systems that

made it difficult to access the physical file information, as well as time inefficiencies that occurred due to manual activities that should have been automated by the system.

5. Other research conducted by Shatat & Al Burtamani (2019) measured the impact of implementing ERP on the performance of academic staff at Sohar University, Bahrain. In this research, questionnaires were distributed to 200 academic staff at the university. From the questionnaires returned, it was concluded that the use of ERP, especially the student information module and the financial management module, had a positive influence on the performance of the academic staff at the university.
6. Darono (2010) examined the implementation of government agency training management information systems based on workflow management systems. One of the objectives of implementing the WFMS was to improve the quality of the information produced by the system so that it can support the creation of quality training. This study resulted in a design for implementing Wfms where Wfms was implemented by being part of the core application using a Service Oriented Architecture (SOA) approach.
7. Supriyono & Sutiah (2021) designed and implemented an ERP framework in the development of ICT-based learning media with the Accelerated SAP method. This study showed that the use of ERP with this method in the development of learning media was able to provide a fairly good accuracy of the time of work completion, which was up to 85%. This shows that ERP is a good framework that can be used in software development projects, especially in the field of learning.

Based on some of these previous studies, the reviewers conclude that an instructional designer is not only required to have the technical expertise in how to compile instructional designs, but is also required to have skills in managing work. This expertise is sometimes not part of the formal education curriculum received by an instructional designer. Therefore, they need tools to help them manage their work.

One tool that can be used by instructional designers for this purpose is project management applications. This application has the main function of creating and documenting tasks, as well as determining and allocating the necessary resources (resource management) to carry out these tasks. As an alternative, ERP implementation can also be considered, which also has a workflow management module in it. Project management and workflow management both aim to manage optimizing the completion of work with the aim of increasing productivity. Both have the same function, namely to plan, connect, monitor and measure the success of a job. At the moment, workflow management system features have been widely offered by ERP providers in their products so that they can be used as alternative tools to help instructional desiners in managing their work.

C. Research Method

The research methodology includes the researcher's paradigm of the research problem, the research strategy to be used, the data collection method and the data analysis method to answer the research problem (Creswell, 2014; Neuman, 2014).

This research was conducted within the pragmatism paradigm in the context of design science. Compared to behavioral science research that focuses on understanding the problems that occur (problem understanding), research with the design science paradigm focuses more on solving problems (problem solving) by creating ideas, practices, technical skills, and products through design, implementation, and use of information Technology (Niehaves & Stahl, 2006a; Uppström, 2017).

According to Brendel, et. al. (2018), Hevner & Chatterjee (2010) and March & Smith (1995), this scientific design approach was chosen for several reasons, namely:

1. This approach is in accordance with the research objective to solve problems by producing technological artifact designs (Davis, 2006; Hevner, et. al., 2004).
2. This approach prioritizes problem solving by creating ideas, practices, technical capabilities, and products through the design, implementation, and use of information technology (Niehaves & Stahl, 2006b; Uppström, 2017).

The artifacts as the result of research with a design science approach refer to March & Smith (1995) and Brendel, et. al. (2018), and can be in the form of: (1) constructs, namely vocabulary, symbols, language, or expressions to formulate phenomena, concepts, or theories so that they are easily understood; (2) models, namely simplification of entities in the real world (in the form of abstractions and representations), to reduce complexity with the aim of providing an understanding; (3) methods, namely in the form of guidelines (methods, algorithms, or best practices) to determine the solution to a problem that is packaged in step-by-step instructions referring to the model that has been made; and (4) instantiation, namely the implementation of constructions, models, or methods in the form of physical objects that aim to solve real problems being faced. An example of instantiation is in the form of a prototype, application (software), or hardware.

C.1. Data Types and Sources

This research is a qualitative research conducted based on the design science research methodology (DSRM). A qualitative research according to Sugiyono (2017) is a process of naturalistic inquiry that seeks deep understanding of natural social phenomena. Data in qualitative research can be in the form of any information or information obtained that supports and contributes to answering research problems. The data used in this study are as follows:

1. Primary data

In this study, the primary data used were the results of focus groups with the learning design development team, as well as the results of interviews with several sources and experts.

2. Secondary data

The secondary data used were in the form of (1) guidelines in the form of laws and regulations; (2) technical instructions for activities; (3) quality standards; (4) previous literature and research on the implementation of Wfms.

Sources of data in this study were obtained from research subjects who in qualitative research are referred to as informants, namely people who provide information about the data the researcher wants related to the research being carried out (Arikunto, 2010). In this study, the subjects of the research were members of the learning design drafting or developing team at the Customs and Excise Education and Training Center consisting of 1 sub-sector head, 5 staff and 1 lecturer.

In addition, data collection in this study also involved sources who were ERP module practitioners and developers. To provide perspectives from the quality assurance, the reviewers also involved a quality assurance team that carried out a self-evaluation process in accordance with the provisions of BPPK Head Decree Number KEP-50/PP/2020 concerning Learning Quality Assurance within BPPK.

C.2. Data Collection Technique

This study used primary data and secondary data. Primary data collection was carried out at the stage of problem identification, analysis (formulation) of solutions and at the design of prototypes. Primary data were obtained using focus group methods and interviews. On the other hand, secondary data were obtained through observation activities as well as documentation studies and literature studies. The primary data collection method and the data used at each stage are presented in Table 1.

Table 1. Data Collection Technique

No	Research Stages	Data Collection Technique
1	Problem identification	• Observation • Documentation study • *Focus group*
2	Analysis and formulation of solutions	• *Focus group* • Interview • Documentation study • Study of literature
3	Prototype design	• *Focus group* • Interview • Documentation study

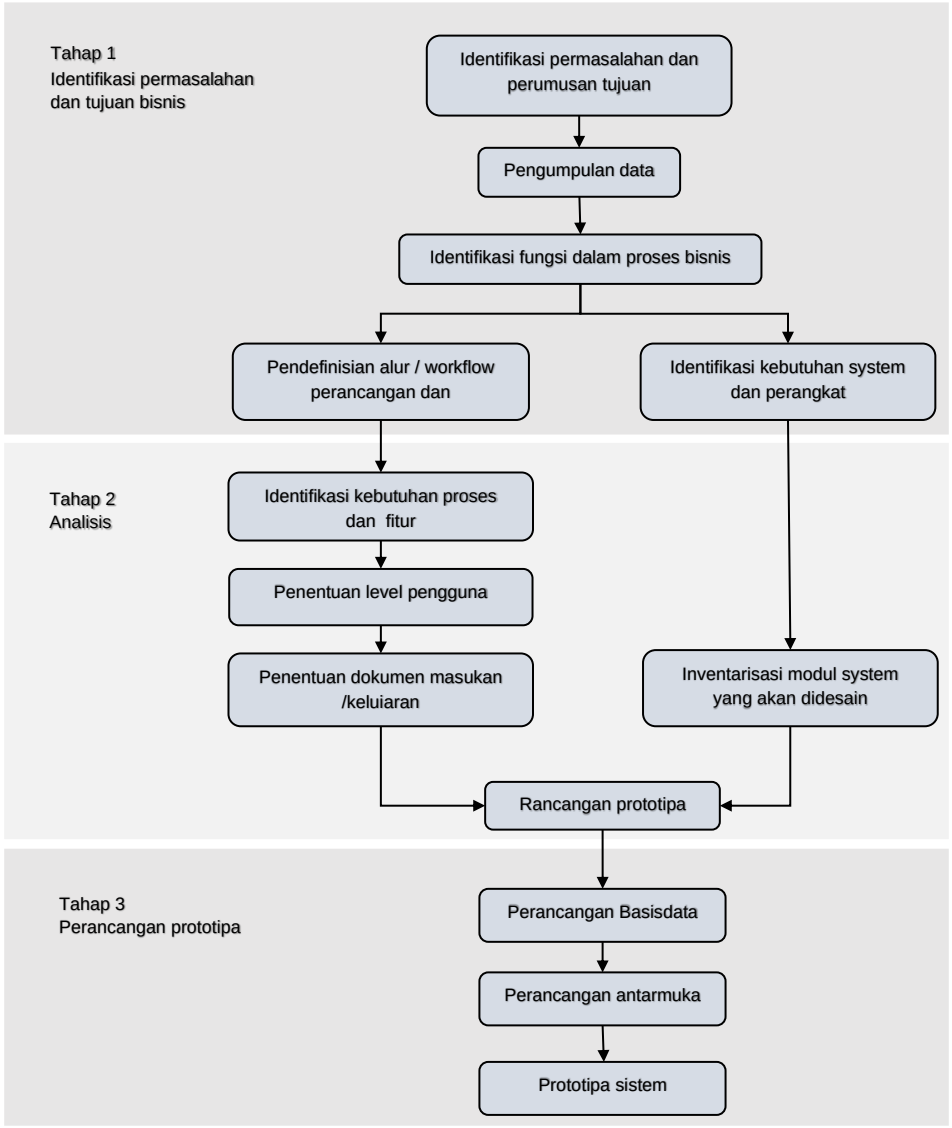
		• Study of literature

Source: analysis results

C.3. Data Analysis Technique

In designing and producing prototypes, this study used the design science research (DSRM) method proposed by Peffers, et. al. (2006). This framework is chosen because it is the standard guide for research related to the creation of technological artifacts (Gregor & Hevner, 2013; Somantri, 2017). This framework consists of six stages for designing, planning, testing, and demonstrating to users and creating documentation for an information system service (Gregor and Hevner, 2013). However, the scope of this study is limited to design activities and prototype design. Modifications to the DSRM framework used for this study are presented in **Error! Reference s ource not found.**.

Picture 2. DSRM Framework



Source: modified from Peffers, et. al. (2006)

D. Analysis and Discussion

The preparation and development of learning designs at the BPPK Pusdiklat are carried out by referring to the Regulation of the Head of BPPK Number PER-4/PP/2017 concerning Instructional Design Guidelines within the Ministry of Finance. In this regulation, it is regulated that the parties involved in the preparation and development of learning designs are (1) the department of planning and development, (2) widyaiswara, and (3) user units (skill group owners). For this reason, the reviewers obtained information from these parties in order to identify the problems and constraints faced by each party in carrying out learning design preparation activities.

This information gathering was carried out using a focus group mechanism in which the reviewers conducted interviews with several informants at once who had a connection with a problem. These resource persons were then given the opportunity to give their opinions on the matter, both individually and collectively (Kitzinger, 1995). The collection of information through this focus group was carried out in a moderated manner by the reviewers themselves.

Based on this focus group activity, information was obtained that the learning design team has made efforts to manage the preparation and development activities of this learning design. However, the management in question is still carried out semi-manually where the team members involved have to enter information into the system in the form of a spreadsheet. This can cause problems when the information is not entered into the system accurately and in a timely manner. This method is considered as the most feasible method when there is no work management system for the preparation and development of this learning design.

In addition, the learning design team also said that the learning design activity management system also has other features. One of the important features needed is the ability of the system to produce documents that become standard output documents from the preparation and development activities of the learning design. Another feature that is also needed is the feature that can provide notifications to the users when a new job or assignment is given to them. It is hoped that this notification feature can also function as a notification when there is work that has passed the set time limit. In addition, to facilitate the quality assurance process, the learning design team also hopes that the system can directly summarize all of the process of the making and developing the learning design.

D.1. Identification of Problems and Business Objectives

1. Problem Identification

Based on the results of the focus group with the parties involved in this activity and combined with the observations made by the reviewers when they were part of the learning design team, some of the problems in the learning design preparation process that can be identified are as follows:

- Control over the work process flow in this activity is done manually
- Monitoring of work completion cannot be done automatically

- It is difficult to track the changes (versioning) that occur in the output documents produced in the learning design development activities.
- Making output documents requires relatively significant time.

2. Identify Objectives.

Motivation or the business objective to be achieved is to produce a workflow management system prototype that can be used as a tool to manage workflow in the preparation of learning design at the Customs and Excise Education and Training Center. In addition to having features for monitoring the flow and completion of work in the preparation of learning design, this system is also expected to have the following features:

a. Task management: a feature to manage to whom the task is given;
b. Notifications: a feature so that the system can provide notifications when there is a new task or when a job's deadline has passed. Notifications are given either in the form of inboxes or pop ups in the system or can also be in the form of emails and short messages;
c. Process approval: a feature that allows supervisors or superiors to check the results of their team's work and change the status of the work to complete;
d. Document management: a feature to manage documents uploaded and generated from the system
e. *Document generator*: a feature that can produce expected output documents;
f. *Workflow summaries*: a feature that can gather all information related to learning design preparation activities, such as the start and finish dates of work, officers assigned to a particular task, completion time for each task, and the documents that are inputted and produced from this activity. This information will be needed during the audit or quality assurance process.

D.2. Identification of Function in the Business Process of Compilation of Learning Design

1. Defining the workflow for compiling learning design.

Currently the compilation and development of learning design at BPPK are carried out based on the Regulation of the Head of the Financial Education and Training Agency Number Per-4/PP/2017 concerning Guidelines for Learning Design within the Ministry of Finance.

Along with the stipulation of Minister of Finance Regulation /Number 118/PMK.01/2021 concerning Title, Organization and Work Procedure of the Ministry of Finance, the workflow for preparing learning design will be adjusted according to the new organizational structure nomenclature stipulated in the Minister of Finance regulation. However, until this study was carried out, implementing regulations governing the preparation of learning designs had not been established. Therefore, this study uses the learning design preparation workflow in accordance with the Regulation of the Head of the Financial Education and Training Agency Number Per-4/PP/2017 concerning Guidelines for Learning Design within the Ministry of Finance.

The parties involved in the preparation of this learning design are: (1) Head of Pusdiklat, (2) Head of Department within the Pusdiklat, (3) Head of Sub-Division of Learning Design, (4) Widyaiswara, and (5) Implementers in the Learning Design Sub-sector. The flow of activities for preparing this learning design is shown briefly in Table 2.

Table 2. Workflow for Compilation of Learning Design

No	Process	Involved Parties	Input and Output Documents
1	Formation of a learning design drafting team	• Head of Pusdiklat • Head of Planning and Development • Head of Sub-Division of Learning Design • staff	• widyaiswara skill group and skill group owner • Decree of Learning Design Compiler
2	Learning design discussion meeting	Learning design drafting team	• Results of learning needs analysis (AKP) • Evaluation results of previous implementation • Previous learning design documents
3	Preparation of learning design documents	Learning design drafting team	• HOOD, • GBPP, • Learning Scenario • Problem Script Framework
4	Submission of teacher recommendations	• Head of Planning and Development • Head of Sub-Division of Learning Design • staff	• HOOD, • GBPP, • Learning Scenario • Problem Script Framework
5	Making of Learning Design Reports		• Learning design reports

In addition to regulating the parties involved, this provision also regulates the time norm that must be met in learning design development activities. This time norm must be met and becomes one of the assessment criteria in the learning quality assurance process carried out by the quality assurance function. The time norm for preparing learning design based on

BPPK Head Regulation Number PER-4/PP/2017 concerning Guidelines for Learning Design in the Ministry of Finance are briefly presented in Table 3.

Table 3. Time Norm for Learning Design Development Activities

No	Process	Deadline
1	**Team Building**	
	- Regular Training	20 HK before implementation
	- Incidental Training	7 HK before implementation
2	**Preparation of Learning Design (KAP, GBPP, SAP, KNS)**	
	- Regular Training	20 HK before implementation
	- Incidental Training	7 HK before implementation
	- Non Training	10 HK before the implementation
3	**Making of Learning Design Reports**	5 HK before implementation
4	**Submission of teacher recommendations**	
	- Regular Training	15 HK before implementation
	- Incidental Training	5 HK before implementation

Source: BPPK Head Regulation Number PER-4/PP/2017

2. Identification of System and Device Requirements

The development of this workflow management system was carried out using the ERP framework described earlier. This framework was chosen with several considerations, namely:

1. Enabling increased scalability that is more flexible because it can be implemented in a modular manner;
2. Several standard modules for certain business functions that have been considered industry best practices are available and ready to use;
3. Open source ERP frameworks are available which offer lower costs than proprietary ERPs (Ganesh, et. al., 2016).

For the needs of developing this prototype, the reviewers prioritized the use of an open source ERP framework with considerations of cost efficiency and ease of customization. One of the ERP framework providers that fall into this category is Odoo. Odoo has a set of business applications with various management functions such as CRM (Customer Relationship Management), e-commerce, accounting, point of sales (POS), to human resource management and learning management systems. In addition, Odoo also offers flexibility in the use of its application modules so that it can be implemented in stages according to the needs and challenges faced by the company.

Odoo was chosen as the ERP application used in the implementation of this study with the following considerations:

1. Odoo has modules that can be customized using the custom add on feature.
2. The development process is faster because Odoo has provided a framework for developing and customizing functions in its application.
3. Odoo provides a community version that is open source with the support of more than 2000 developers who are members.

Based on data released by Odoo (2018) in its white paper, currently Odoo has more than 3.9 million users spreading across 130 countries. Apart from that, currently Odoo also offers around 30 main modules that can be used by users of the community version. These modules are continuously updated by in-house developers. Besides the main modules, Odoo also provides more than 16,000 modules developed by the developer community.

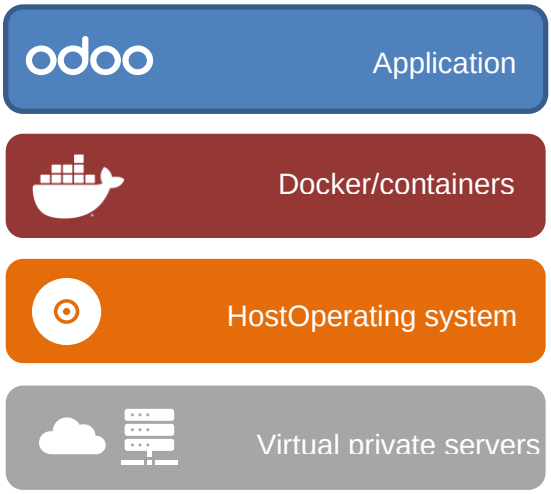
In developing this prototype, the reviewers used Odoo Community v.14 which was installed on a virtual private server (VPS) running the LINUX Ubuntu Server operating system version 20.04 LTS with a 64-bit Kernel. Installing this application also requires another application, namely Docker as a container to virtualize the developed application. In addition, in the development process, an application is also needed to edit the programming code. For this purpose, the reviewers uses Microsoft Visual Studio Code along with some of the add ons needed. The list of applications used for the development of this prototype is presented in Table 4. Applications Used4.

Table 4. Applications Used

No	Name	Version	Function
1	Odoo ERP	14.0	*Framework* ERP
2	Linux Ubuntu Server	20.04 LTS	Server OS
3	Docker	19.03.08	Container
4	Microsoft Visual Studio Code		Code editor
5	Github Desktops	3.1.2 (x64)	Project management

source: analysis results

The use of Docker in this prototype development was chosen because Docker offers several advantages. First, Docker allows developers to pack and run an application in an isolated environment called a container. The application will run with all the dependencies that are the minimum requirements of the application. Other dependencies that are not needed will not be included in the container. Docker runs an application in an isolated environment (separate) from other containers thereby reducing the potential for compatibility issues between applications (Docker, 2021). Application development architecture using Docker is presented in Picture 3.Picture 3. Application Architecture



Picture 3. Application Architecture

Second, compared to conventional virtualization systems such as virtual machines, Docker provides better speed. This is because Docker is more efficient in using computer resources (Vase, 2015). This also happens because Docker uses an important component that has been provided by the operating system, namely the kernel. This allows containers to be smaller in size (Boettiger, 2015).

Third, Docker has strengths in terms of portability. The use of this container mechanism makes it easier for developers to develop and implement an application in any operating system environment because in a Docker image all the dependencies needed by the application are available to operate (Bashari Rad, et. al., 2017).

Fourth, Docker can also be deployed to various types of servers relatively easily. A Docker container can be installed on a cloud server or on a local server. This can be done because Docker has provided a standardized framework for the operation of an application stored in a container as a Docker image. As a result, these applications can run more reliably and consistently (Bashari Rad, et. al., 2017; Boettiger, 2015).

The development of this prototype was carried out using a remote method using a development server on a virtual private server (VPS). This

method was chosen for scalability reasons. The use of VPS can be easily increased or reduced in capacity (upscale and downscale) to suit existing needs.

D.3. Analysis

1. Analysis of feature/functionality requirements.

Based on observations and focus groups, the identification of the feature requirements of the workflow management system for the preparation of learning design is as shown in Table 3.

Table 3. Feature/Functionality Requirements

No	Feature	Information
1	*Task management*	Feature for creating new jobs, assigning jobs, approving job completion, and monitoring the status of job completion. This feature is also expected to provide information in the form of a dashboard to users about what needs to be completed within a certain time. In addition, this feature can also display a timeline and progress of completing each job.
2	*System notifications*	Feature that allow the system to provide reminders or notifications to users, either through the system itself or via email. This notification is given when there are jobs that have just been created or assigned, jobs that are approaching the job completion deadline, jobs that are late, and jobs that haven't started yet. Notifications are expected to have an indicator in the form of a different color status according to their urgency.
3	*Document management*	Feature to manage documents entered and documents generated during the workflow process. This feature records the metadata of these files, performs indexing and versioning when there is a file update.

No	Feature	Information
4	*Document generators*	Feature to produce output documents in a predetermined format based on the data input into the system.
5	*Workflow summaries*	Feature to gather information about the overall work process, summarize that information and generate reports.

Source: analysis results

2. User level analysis

As a form of control over work flow, this system also has user management that regulates the level of access and authority of each user. In this system, users are grouped into four categories, namely operators, supervisors, experts, and guests. The division of this user category is adjusted to the parties involved in the work flow.

Users at the operator level consist of technical staff whose job is to create projects, upload various documents that are complete in the project, and enter various information in the available forms. Users on level supervisor consist of users who have the authority to approve projects that have been made, assign projects to certain individuals and change the completion status of a project. Users at this level consist of sub-sector heads and department heads who carry out the learning design function. On the other hand, users at the expert level are users whose job is to approve the learning designs that have been prepared. In addition, this user can also change the learning designs that have been made. Users at this level are Widyaiswara and subject matter experts who have technical expertise with learning and skill group owners (SGO). Users with the guest level are users who have access rights to view details of the learning design project being worked on as well as view the output documents resulting from this process.

This level of access and user authority is related to the role of each user in modifying data in the database. In this system, authority is grouped into adding new data (create), displaying or viewing data (read), modifying or changing data (update) and deleting data (delete). The access level and authority of each user are presented in **Error! Not a valid bookmark self-reference.**.

Table 4. User Level and Authority

No	User	Category	Create	Read	Updates	Delete
1	Head of Division	Supervisor	✓	✓	✓	✓
2	Section Chief	Supervisor	✓	✓	✓	✓
3	Executor	Operator	✓	✓	✓	

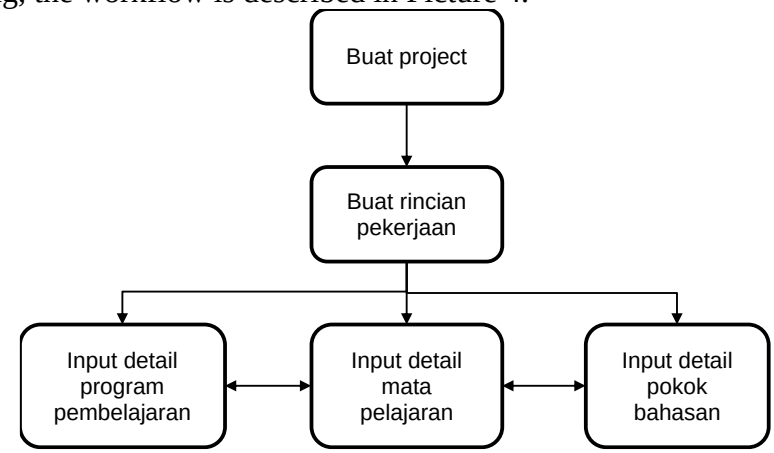
No	User	Category	Create	Read	Updates	Delete
4	Widyaiswara/Tutor/Teacher	Expert		✓	✓	
5	Other departments or sections	Guest		✓		

Source: analysis results

D.4. Design.

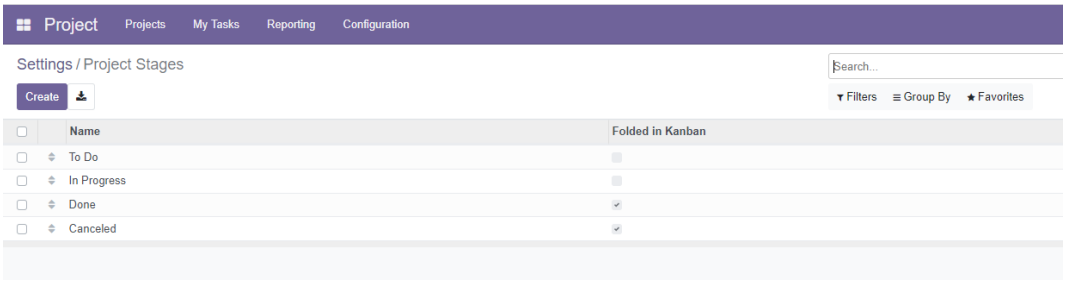
1. The design of workflow process.

The workflow in this prototype starts with creating a new project or job. The next stage is to make various jobs (tasks) that will be carried out along with the deadline for completion. Then, for reporting purposes, the user will input the details of the learning design in the input form provided. The information included includes details of the learning program and the learning objectives to be achieved, details of the subjects along with indicators of success and duration, evaluation mechanism, participant requirements, and other detailed information needed in the learning design document. Broadly speaking, the workflow is described in Picture 4.



Picture 4. Process Flow

In managing workflow, one thing that needs to be defined is the status of each stage of work. This status will serve as a marker of whether a job has been completed or not. This work status will also be related to the duration of the work. The notification system can be set to provide reminders when there are jobs that have not started. In this system prototype, work status settings are made through the settings menu. This work stage status setting will apply to the entire system. Picture 5 shows the setting status of the job.

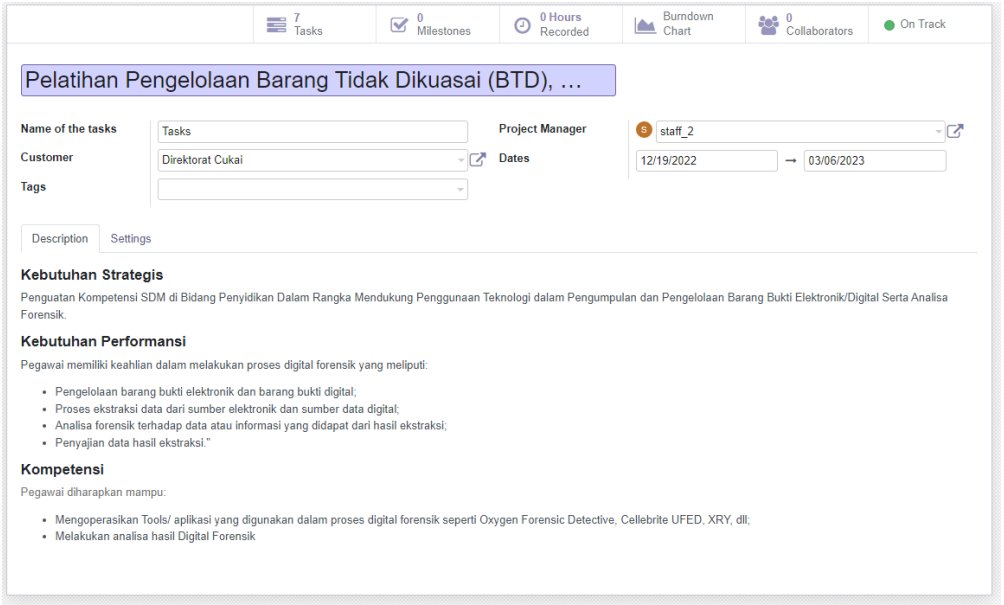


Picture 5. Work Stage Status Setting

In the development of work flow management, the status of the stages of work is defined as follows:

1. *To do*: work with To Do status is work that is planned but has not yet started. If there are details of work that has been started, then the job status will change to In Progress
2. *In progress*: this status indicates that the job has started and is in the process of being completed.
3. *Done*: this status indicates that all stages of work have been completed
4. *Canceled*: a job labeled canceled is a job that was planned but canceled.

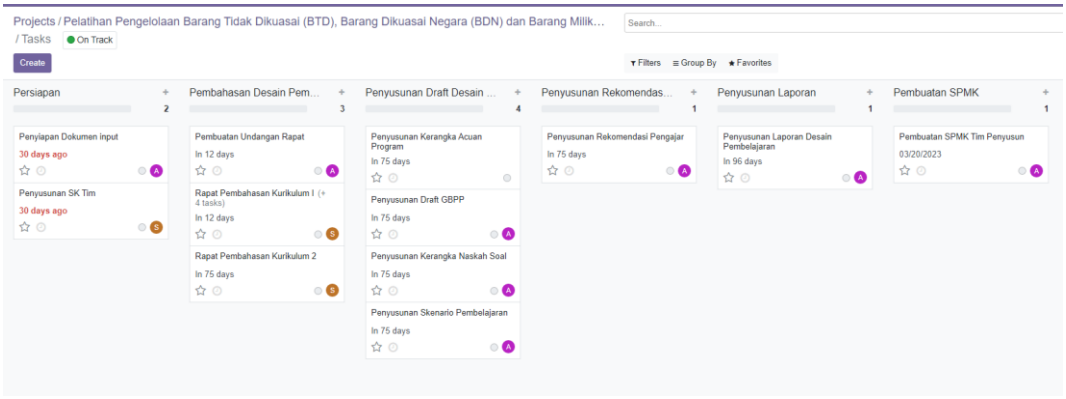
After setting the status of the stages of work being completed, then the user creates a project or the name of the work to be carried out. Important information that needs to be included at this stage is the name of the job (project), job description, project manager or person in charge of the work, as well as the starting time and project completion deadline. Detailed information recording of a project is displayed in Picture 6.



Picture 6. Project Information

After the project has been successfully created, the next step is to define the details of the work for each learning design project. As with setting the

status of stages of work, recording the details of this work is done to provide more detailed information related to a job. In addition, at this stage the user can also set a deadline for completing each work detail which will later activate the notification feature (reminder). The display of making details of activities on a project is presented in Picture 8.



Picture 7. Job Details

To monitor the completion of each stage of work, this prototype also provides a display in the form of a dashboard. The dashboard on this prototype consists of 2 (two) types, namely a dashboard that displays the completion status of the entire project and a personal dashboard for each user. The project dashboard as a whole displays information related to the work that will be, is being or has been completed. This dashboard can only be accessed by users who have a supervisor level. On the other hand, the personal dashboard for each user displays the job status assigned to that user.

The work details for the learning design preparation project are as follows:

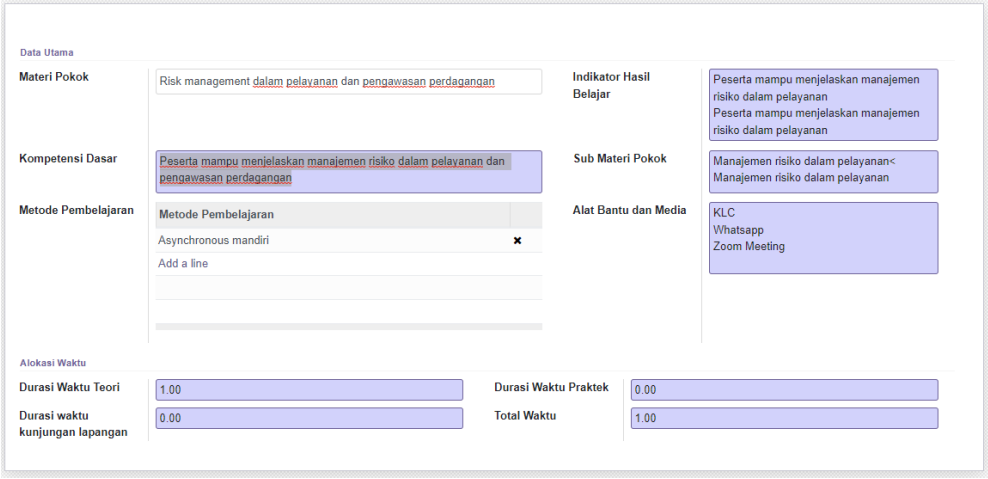
1. Preparation.
   This preparatory stage is the initial stage of the work on preparing the learning design needed to prepare all the required administrative documents. The documents needed at this stage are the results of the learning needs analysis, the evaluation results of the previous training implementation, the previous program's terms of reference and the notes in the recommendation meeting. In addition, at this stage documents will also be produced in the form of a decision letter for the formation of a learning design drafting team. The formation of this team is targeted to be completed 60 working days prior to the implementation of learning.

2. Learning design discussion meeting.
   The next work is the implementation of learning design discussion meetings. In this activity, the learning design is prepared based on the initial information obtained at the preparatory stage. The learning design

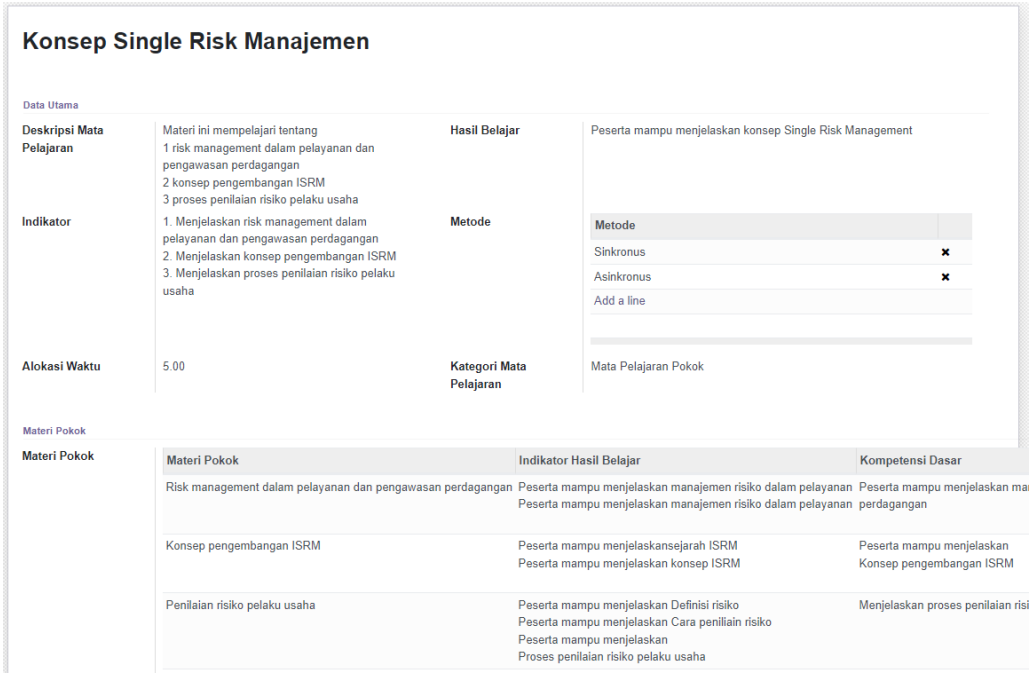
discussion meeting was attended by all members of the learning design team and the related skill group owner. The document produced after the learning design discussion meeting is the minutes of the learning design discussion meeting. This learning design discussion meeting can take place more than once, adjusting to the scope of the learning design to be prepared. It is hoped that this series of learning design discussion meetings can be completed before the deadline of 25 working days prior to the implementation of learning activities.

3. Preparation of learning design documents.
   Based on the results of the learning design discussion meeting, the team then formulate the learning design in a draft learning design document consisting of KAP, GBPP, learning scenarios and problem script frameworks. These documents need to be approved by all members of the drafting team and then ratified by the Head of Pusdiklat. These learning design documents become the output documents that must be produced at this stage. The preparation of this learning design document is targeted to be completed no later than 20 working days before the implementation of learning.

This prototype has provided an input form to include various details about the learning program being designed, such as competency standards to be achieved, indicators of learning success, subjects given to achieve learning objectives, subject matter in each subject, duration of time for each subject discussion, etc. The input form for each of this detailed information is presented in Picture 9 and Picture 10.



Picture 8. Main Subject Input Form



Konsep Single Risk Manajemen

Data Utama

Deskripsi Mata Pelajaran	Materi ini mempelajari tentang 1 risk management dalam pelayanan dan pengawasan perdagangan 2 konsep pengembangan ISRM 3 proses penilaian risiko pelaku usaha	**Hasil Belajar**	Peserta mampu menjelaskan konsep Single Risk Management
Indikator	1. Menjelaskan risk management dalam pelayanan dan pengawasan perdagangan 2. Menjelaskan konsep pengembangan ISRM 3. Menjelaskan proses penilaian risiko pelaku usaha	**Metode**	Metode Sinkronus ✖ Asinkronus ✖ Add a line
Alokasi Waktu	5.00	**Kategori Mata Pelajaran**	Mata Pelajaran Pokok

Materi Pokok

Materi Pokok

Materi Pokok	Indikator Hasil Belajar	Kompetensi Dasar
Risk management dalam pelayanan dan pengawasan perdagangan	Peserta mampu menjelaskan manajemen risiko dalam pelayanan Peserta mampu menjelaskan manajemen risiko dalam pelayanan	Peserta mampu menjelaskan ma perdagangan
Konsep pengembangan ISRM	Peserta mampu menjelaskansejarah ISRM Peserta mampu menjelaskan konsep ISRM	Peserta mampu menjelaskan Konsep pengembangan ISRM
Penilaian risiko pelaku usaha	Peserta mampu menjelaskan Definisi risiko Peserta mampu menjelaskan Cara peniliain risiko Peserta mampu menjelaskan Proses penilaian risiko pelaku usaha	Menjelaskan proses penilaian risi

Picture 9. Subject Input Form

4. Preparation of teacher recommendations.
   In addition to the learning design documents, the team also needs to prepare teacher recommendations to be submitted to the department that manages the delivery of learning. The teacher's recommendations were prepared based on the recommendations of the drafting team in a learning design discussion meeting. Lecturer recommendations must be submitted by the learning design team no later than 15 working days prior to the implementation of the lesson.

5. Preparation of learning design reports.
   The preparation of learning design reports is a form of accountability from the learning design development team which is submitted to the Head of the Education and Training Center. This learning design report contains information about a series of learning design activities along with all of the resulting output documents.

6. Issuance of a statement of carrying out activities (SPMK).
   After all stages of work have been completed, an SPMK will be issued as a statement from the leader giving the assignment that the task has been completed. For functional officials involved in preparing learning designs, SPMK is used as one of the requirements in submitting credit scores.

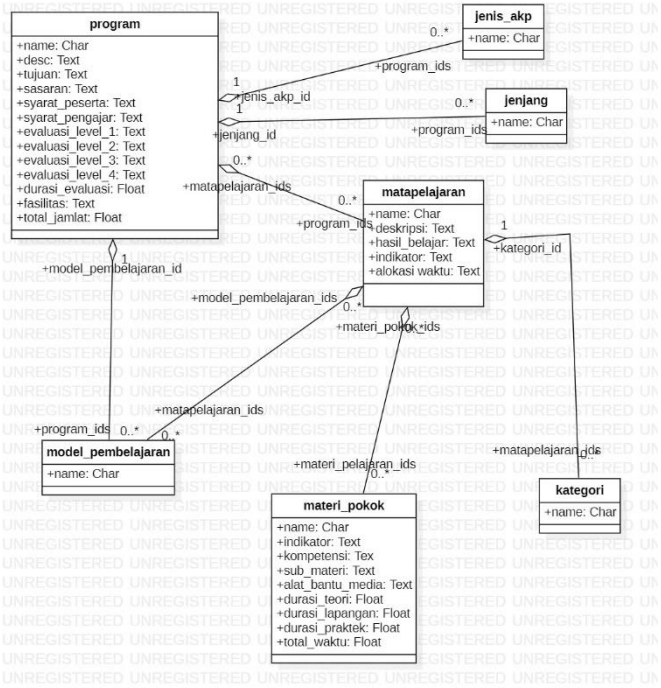
The preparation of work designs at the Customs and Excise Education and Training Center has standardized details and stages of work. Therefore, this job detail recording process can be performed once when the job is first created. The details of the work for preparing the next learning design can be made by duplicating the details of the existing work

Apart from being a system that can monitor work flow, this prototype system also has features for inputting data in learning design documents as well as producing output documents. This is one of the features needed by team members when preparing learning design documents. With this feature, the work of compiling learning design documents according to the format can be done more easily and quickly.

2. Database design

Database design is an activity to design the structure and relationships between entities in the database. The main purpose of designing this database is to achieve application functionality in accordance with the business processes to be carried out. The integration feature is one of the features that is an advantage of ERP compared to other frameworks. This advantage is reflected in the database design. Database design in ERP has been made in such a way that adding new modules can be done relatively easily and quickly.

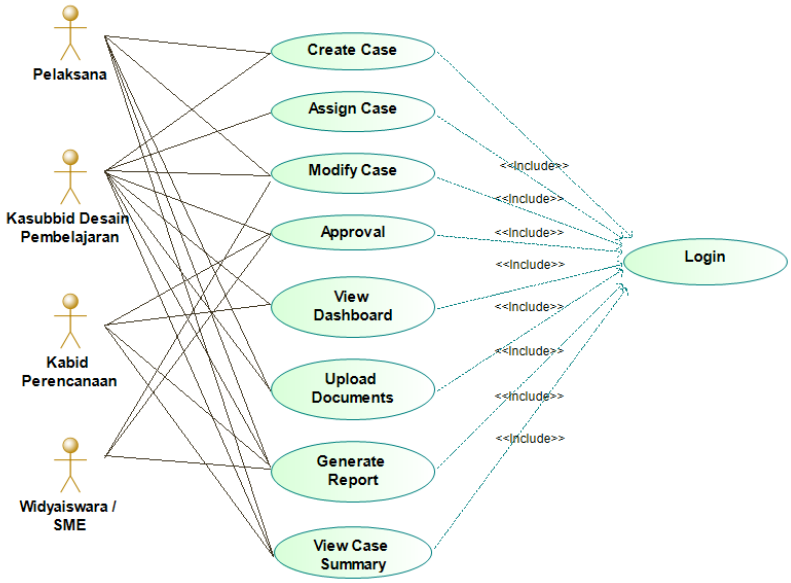
Odoo ERP uses the Postgre SQL database management system (DBMS) which was natively installed when using Odoo for the first time. In this study, the database design process is carried out by making class diagrams. This class diagram describes the structure of each entity in the database and its relationships with the other entities. The design of this class diagram is done with the help of the Star UML application so that commands can be directly generated for creating the database. Class diagrams in designing the database are presented in Picture 11.



Picture 10. Database Design

3. Interface design

Interface design aims to define how users will interact with the system along with inputs and outputs that can be received and produced by the system. This interface design will be carried out based on the work flow process that has been defined in the previous stage. The type of user interaction with the system prototype is described in the use case diagram in Picture 12 below.



Picture 11. Use Case Diagram

The main consideration at this interface design stage is that the use of this application can be used in a more user-friendly manner. In addition, this interface design also considers the information to be inputted in the prototype and displayed in the output document. In designing this interface, the reviewers used the standard interface format provided by Odoo ERP as a framework for developing this prototype.

E. Research limitations

The design of the prototype in this study aims to provide a proof of concept that ERP can be used as a tool for implementing a workflow management system in the preparation of learning designs. However, this designed prototype has not been implemented in actual circumstances and has not gone through an evaluation process or a user acceptance test. In addition, the resulting prototype may not include all the activities carried out in the process of preparing the learning design. For this reason, a more in-depth needs analysis is needed regarding the activities carried out during the preparation and development of learning designs that have not been standardized in the work flow. Furthermore, the prototype design in this study was carried out in a limited way only for learning design preparation activities. The development of similar systems for other processes or activities may require different development methods and have different complexities.

F. Conclusions and Recommendations

F.1. Conclusions

Based on the results of the analysis of the data collected in the design of this prototype, several conclusions can be drawn as follows:

1. Skills in managing work is one of the skills that must be possessed by learning design developers in order to produce learning designs that are quality, timely, and can meet user expectations;
2. Learning design preparation activities at the Customs and Excise Education and Training Center have not been managed using an information system that is able to facilitate the learning design development team in managing and monitoring work completion, as well as allocating resources
3. *Workflow management system* contained in the ERP can be considered to be one of the solutions in providing a system for managing a series of activities in the preparation of learning designs;
4. The results of this study have succeeded in producing a prototype workflow management system based on Odoo that can be used to manage learning design activities as well as being a proof of concept that workflow management system in ERP can be applied for this purpose.

5. Some of the Wfms features in Odoo that can be used are task management, system notifications, document management, document generators, and workflow summaries;
6. Wfms design in Odoo ERP is done by creating a new add-on (custom add-on) whose function is adapted to the workflow and detailed information that must be displayed;
7. In designing this prototype, the activities for preparing learning designs at the Customs and Excise Education and Training Center are broken down into six sub-activities, namely preparation, learning design discussion meetings, preparation of learning design documents, preparation of teacher recommendations, preparation of learning design reports, and issuance of statements of carrying out activities (SPMK).

F.2. Recommendations

1. Academic advice.

a. The Wfms prototype in this study is designed using the design science research methodology (DSRM). DSRM is a framework that is specifically used to produce technological artifacts, in this case the prototype of a system. This framework can also be used for further research, especially research that aims to produce a technological artifact, such as constructs, models, and methods.
b. *Framework* DSRM used in this study consists of 7 stages, from identification of needs to evaluation and communication. However, the scope for this study is restricted at the design stage, and has not gone through the implementation and evaluation stages. Therefore, studies or research related to the use of ERP can be carried out by implementing all stages in DSRM.
c. Moreover, further research and studies can be focused on the impacts of the implementation of ERP on changes in performance and service quality of a government agency. This is an interesting thing to study because natively ERP is indeed presented to answer problems that exist in institutions that aim to generate profit.

2. Operational advice.

The results of this study indicate that the Wfms contained in Odoo ERP can be implemented as a tool in managing the work of preparing learning designs at the Customs and Excise Education and Training Center. Apart from Wfms, Odoo ERP also offers other features that can be used to manage and integrate business processes and allocate resources within an institution to improve service quality while achieving operational efficiency. Therefore, ERP implementation for other business processes at the Customs and Excise Education and Training Center needs to be considered.

The use of ERP in other business processes at the Customs and Excise Education and Training Center can be carried out in the following stages:

1. Identify the activities (tasks) contained in each business process along with the time norm for completion;
2. Define the parties related to the completion of these activities and their authorities in the system;

3. Identify output documents and input documents related to the business process;
4. Define the measure of the successful completion of the task;
5. Design databases and customize ERP modules according to identified business processes.

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