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**Mobile Learning Development in Security Intelligence Technical Functions Courses for  
Police Academy Cadets**

**Wita Puspitasari<sup>1</sup>, Eveline Siregar<sup>2</sup>, Robinson Situmorang<sup>3</sup>**

<sup>1,2,3</sup>Pascasarjana Universitas Negeri Jakarta, Jl. Raya Pemuda – Jakarta, Indonesia  
Email: witauspitasari@gmail.com

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**Abstract**

This research is based on the fact that most Akpol Cadets have difficulty in understanding the materials at the subject of Security Intelligence Technical Functions. This is because of the many foreign terms in intelligence that are quite difficult to understand. In addition, it is also caused by the limitations of teaching materials that exist today in loading visual images or illustrations that can facilitate Akpol Cadet in understanding the material. This research aims to produce mobile learning in the Security Intelligence Technical Functions as a source of learning that is of high innovation value so that cadets can learn the subject matter of Security Intelligence Technical Functions more easily and gain more real experience of technical learning materials, and the learning process can become more effective because Akpol Cadets can re-review the learning materials outside the learning process. This research will apply Research and Development (R & D) method using Dick and Carey research and development model, while for product development model to be done using Hannafin and Peck model at the learning material development stage.

**Keywords:** Security Intelligence Technical Functions, Akpol Cadet, mobile learning, Hanafin and Peck

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**INTRODUCTION**

The National Police is an organization that is directly responsible under the President as the duty bearer of the police throughout Indonesia. According to the Law of the Republic of Indonesia no. 2 of 2002 concerning the National Police of the Republic of Indonesia, Article 4 which states that "The National Police of the Republic of Indonesia aims to realize domestic security which includes maintaining public security and order, order and upholding the law, the implementation of protection, protection, and services to the community, as well as maintaining peace. society by upholding human rights ”.

The National Police puts forward the motto "Promoter" which is a positive breakthrough within the Polri institution. Especially in terms of supporting the *Grand Strategy of the National Police* from 2016 to 2025, namely the Stage *Strive for Excellence*. Through this breakthrough Promoter, it is hoped that the National Police's service to the community will be better. The Promoter motto is an acronym for "Professional, Modern and Trusted". Professional, namely increasing the competence of the Polri Human Resources which are increasingly qualified through increasing the capacity of education and training, as well as carrying out policing patterns based on standard procedures that have been understood, implemented and their success can be measured. Modern is to modernize public services that are supported by technology so that they are more easily and quickly accessed by the public. Trustworthy, namely carrying out internal reforms towards a Polri that is clean and free from KKN, in order to realize objective, transparent, accountable and just law enforcement. The Promoter Program is an effort to create superior human resources and in order to improve services to the community.

Based on the foregoing, Polri personnel are required to have good competence and performance in carrying out their duties. In accordance with the Chief of Police's Promoter program which focuses on three main policies, namely realizing superior human resources, strengthening Harkamtibmas, strengthening enforcement law professional and fair. In the effort to strengthen the National Park and Law Enforcement, members of the National Police are required to have capabilities in the technical functions of the police, which include the Technical Detective Function, the Security Intelligence Technical Function, the Traffic Technical Function, the Binmas Technical Function, and the Sabhara Technical Function. The five technical functions are The basic competencies that members of the National Police must have as provisions in carrying out their duties in the field in accordance with their main duties and functions as protector, protector and servant for the community. The achievement of these competencies is not obtained just like that, but through a process of education or training. Education and training institutions are expected to be able to produce superior human resources.

The Police Academy (Akpól), which is under the auspices of the National Police Education and Training Institute, aims to form a First Officer of the National Police who has cultural characteristics, is physically and mentally healthy and is professional in the field of police science practice, in carrying out the main duties of the National Police. Later, Akpól graduates are expected to be competent as front-line leaders in the technical functions of the police as well as first-level managers in police duties. Police Academy graduate officers who act as leaders in police duties are required to have specific work skills competencies in carrying out technical practical functions of the police skillfully using an effective and efficient approach to be able to handle community problems in maintaining public trust.

The development of crime in an increasingly complex society demands that Polri officers be able to immediately provide appropriate solutions to various security and order problems. The number of crimes of terrorism and radicalism that have occurred in Indonesia since 2018 has increased compared to the previous year. This is also directly proportional to the number of actors that has increased significantly. Not to mention the crimes of hoax spreading that are increasingly rampant. Efforts to control crime can be carried out in two ways, namely preventive and repressive. Preventive measures are efforts to prevent criminal acts, while repressive measures are efforts to eradicate crime (Bawengan, 1977). These two types of action are difficult to separate because they are related to each other. Besides, there is one more type of prevention, namely preemptive. In practice in the field, the National Police calls this preemptive term "community development" or "indirect preventive", namely guidance aimed at making people become *law abiding citizens* (Parsudi, 2004).

The security intelligence technical function (intelkam) is one of the 5 (five) technical functions of the police. The five technical functions of the police must always have integration and harmony in the effort to carry out the main duties of the Police. In connection with the implementation of the main duties of the National Police, the intelligence function is to act as the eyes and ears of the leadership / organization. As the "eyes and ears" of leaders / organizations, intelligence is required to be observant in detecting actions which include *early detection* and *early warning* so that early prevention can be carried out for disruption of the social security and security services. Police intelligence in carrying out action detection requires a process of interaction with the target, in order to know the root of the problem, by knowing the root of the problem, intelligence is required to be able to identify opportunities for resolution so that problems can be prevented from expanding.

The technical intelligence function has an important role in the preventive efforts of the National Police in carrying out their duties. Therefore, the technical intelligence function course is one of the compulsory subjects taught at the Police Academy, so that AKPol cadets can have special competences in the field of police technical functions. In addition to the intelligence course, there are also courses on traffic technical functions, criminal investigation (reskrim), sabhara and binmas. The respective technical functions of the police work together to create the maintenance of security and order in the community.

Based on the results of the preliminary research conducted, data obtained from the results of the questionnaire that most of the cadets had difficulty understanding the material in the intelligence technical function course. This is because there are many foreign terms in intelligence which are quite difficult to understand. In addition, it is also caused by the limited teaching materials (hanjar) currently available in loading visual images or illustrations that can make it easier for cadets to understand the material. This is reinforced from the results of interviews with lecturers who teach the technical functions of the police. The lecturer in the technical intelligence function course revealed that most of the cadets had difficulty understanding foreign terms related to intellectual knowledge. One of the reasons for this lack of understanding is the many activities of cadets outside of class activities that emphasize physical formation activities, so that the concentration of cadets is not optimal when receiving lecture material in class. Because AKPol cadets are also required to participate in various activities of physical care and coaching to obtain mental personality values and physical health values which are the requirements for their graduation. In addition, AKPol cadets are still very unfamiliar with police science and knowledge of the technical functions of the police. Therefore, a learning strategy is needed that can attract cadets' interest in learning and can provide a more concrete understanding of the technical functions of the police, especially in the subject of technical intelligence functions.

One of the efforts to improve the understanding and competence of the Police Academy Cadets is by facilitating the teaching and learning process of Taruna by paying attention to various aspects, namely the competence of quality lecturers, innovative and varied learning methods and the use of effective and efficient teaching materials, learning media and learning resources. . In the learning process, the Police Academy needs to use technology and information as a tool in order to make it easier for cadets to understand the material being studied, especially in the material on the Technical Functions of the Police, because this material is basic knowledge that every member of the National Police must have in carrying out their duties. in order to solve various problems in society related to security and order.

One of the most noticeable technological developments is the development of technology *mobile*, this can be seen clearly from the easier it is for someone to access information using a device *mobile* or better known as a *mobile device*. Wrong one *mobile device* is a *cellphone* that is included in the classification of *communication devices*. *Mobile phones* with the Android operating system have a big advantage compared to *operating systems* other,

namely distributed in an *open source* or *platform* openwhere the *source code* or computer code is free to be seen by others and others. With its huge potential, the Android operating system that sped up quickly and attracted the attention of application developers, they developed various applications ranging from applications *social networking*, business, health, music, photography, weather, transportation, communication, entertainment, social, style. life, news, buying and selling to applications intended for the learning process. This is reinforced by Stanton and Ophoff in their research in a journal entitled "*Towards a Method for Mobile Learning Design*" which states that mobile learning is a combination of cellular technology and its ability to create unique learning environments and opportunities that can reach across time and place. Likewise research by Amarolinda Zanela Saccol, Nicolau Reinhard, et.all (2010), entitled "*M-Learning (Mobile Learning) in Practice: A Training Experience with it Professionals*", the results of this study illustrate the possibilities of implementing *mobile learning* in training in an organization that is able to overcome limitations in the use of technology in accordance with learning needs.

These advantages are in accordance with the needs of the Police Academy Cadets to be able to access learning materials without being limited by time or class space. Although in the learning process cadets are not allowed to use devices *mobile*, they can use them during excursions, when carrying out the overnight permit outside (IBL) or when they are already carrying out their assignments in the area later. So it is hoped that Taruna can *review* the subject matter again and get a more real learning experience in the form of visuals and audio-visuals, especially in the material on intellectual technical functions whose practical composition is greater than the theory.

The use of learning resources based applications *mobile* on in the learning process is expected to provide a more real experience for students related to material in theoretical form that becomes more applicable. When carrying out work training (latja), Akpol cadets can open and review the material on the technical functions of intelligence so that they can easily apply the material. The selection of learning resources based on android is one of the alternative options to improve the competence of cadets of the National Police Academy in the technical functions of the intelligence sector and the creation of superior and professional Police HR So that the first point of the National Police priority program related to creating superior human resources can be achieved.

This study aims to: (1) produce a *mobile learning* material for Investigative Techniques and Tactics in the Intelligence and Security Technical Functions course for Police Academy Cadets; (2) testing the feasibility of the *mobile learning* material for Investigative Techniques and Tactics in the Intelligence and Security Technical Function course for Police Academy Cadets; and (3) testing the effectiveness of the *mobile learning* material for Investigative Techniques and Tactics in the Intelligence Technical Functions course for Police Academy Cadets.

With the development of learning through *mobile learning* , it is hoped that the learning process can be more effective because the Police Academy Cadets can again *review* learning outside the learning process. In addition, this development can also be used as a reference for lecturers and students of Educational Technology and other institutions that will develop other learning application programs.

## **METHODS**

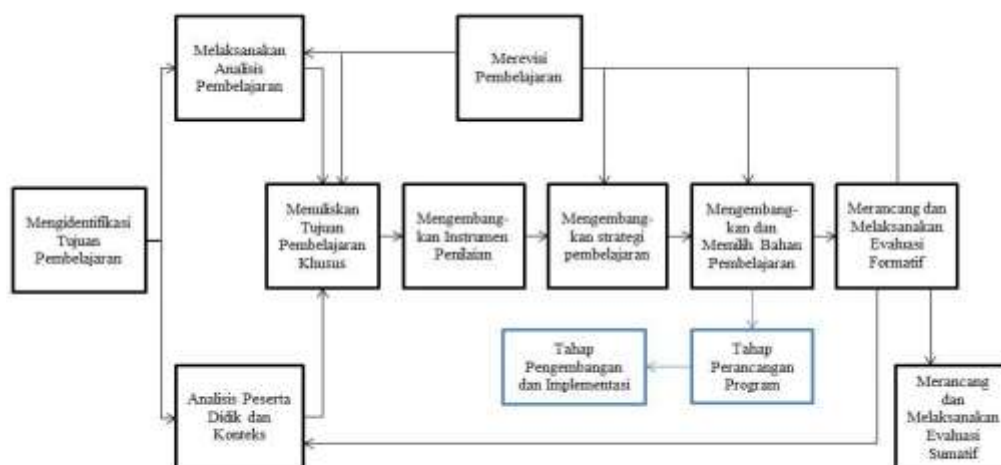
The method used in this research is *Research and Development* (R & D) which is a research approach to conducting research, development and testing of a product. The steps of this process are usually referred to as the R&D cycle, which consists of studying the research findings related to the product to be developed, developing the product based on these findings, testing areas in the setting that will be eventually used, and revising them to correct any

deficiencies found. in the stage of submitting testing. In the more stringent program of R&D, this cycle is repeated until the test data fields show that the product meets defined behavioral objectives.

Seals and Richey (1994) define "development research as a systematic assessment of the design, development and evaluation of programs, processes and learning products that must meet the criteria of validity, practicality, and effectiveness". Meanwhile, Plomp (1999) added the criteria "can show added value" in addition to the three criteria.

Based on the above opinions, it can be concluded that development research is a process used to develop and validate products used in education. The resulting products include: training materials for teachers, learning materials, media, questions, and management systems in learning.

The purpose of this development research is to produce a *mobile learning*, which is developed systematically using the Dick and Carey research and development model with a sequence of steps including: identification of learning objectives, analysis of learning, analysis of learners and context, formulating test work objectives or specific objectives, develop assessment instruments, develop learning strategies, develop and select learning materials, design and implement formative evaluations, design summative evaluations, and revise teaching. This development model is also combined with the Hannafin and Peck product development model at the stage of developing learning materials in the form of *mobile learning* on materials for intellectual technical functions for Police Academy Cadets, which can be seen in the development design drawing below.



**Figure 1.** Chart of Modification Development Model between Dick and Carey Model with Hannafin and Peck

This research was conducted at the Police Academy, Semarang. The research population was the cadets of the Police Academy level III. The research sample was 1 class and 30 cadets.

Data collection techniques are tools used by researchers to collect information. In this study, researchers used data collection techniques in the form of interviews, questionnaires, and learning outcomes tests.

Data analysis techniques used in development research *mobile learning* in the Intelkam Technical Function course are:

a. Qualitative descriptive

analysis The qualitative descriptive analysis technique is used to manage data from the results *review* of material experts, learning design experts, instructional media experts, and student

respondents' results. This qualitative descriptive data analysis technique is carried out by grouping information from qualitative data such as suggestions, comments, criticism of improvements or revisions contained in the questionnaire (Teguh et al., 2014). The results of these data will be used to revised development products *mobile learning* in the Intelkam Technical Function course.

b. Quantitative descriptive

analysis Quantitative descriptive analysis technique is used to process the data obtained in the form of a percentage. The formula used to calculate the percentage of each subject / aspect of the trial is as follows (Sugiyono, 2017; Teguh et al., 2014):

$$\text{Percentage (\%)} = \frac{\text{Information}}{\text{total}} \times 100\%$$

SMI score: maximum ideal score

At the stage of the analysis of Akpol Taruna learning as information material related to the development needs analysis, the provisions formulated in the following table are used:

**Table 1.** Criteria for Learning Analysis of Police Academy Cadets

Level of Achievement of	Qualifications
<b>1</b>	<b>2</b>
90% - 100%	Very good
75% - 89%	Good
65% - 74%	Enough
55% - 64%	Less good
0 - 54%	Very not good

for expert trials (*expert review*) which includes material experts, instructional design experts and media experts, then the provisions formulated in the following table are used:

**Table 2.** Criteria for Product Eligibility *Mobile Learning*

Level of Achievement	Qualification
<b>1</b>	<b>2</b>
86% - 100%	Very feasible
76% - 85%	Eligible
56% - 75%	Fairly Eligible
<55%	Inadequate

As for the results of the effectiveness of learning using *mobile learning* in the Material Techniques and Investigative Tactics of the Intelligence Technical Function course, it was obtained from the average score of the evaluation of the learning outcomes of 30 Police Academy cadets as respondents in this study. The score of the effectiveness of learning outcomes for the Police Academy Cadets using *mobile learning* in the Material Technique and Investigation Tactics for the Intelligence Technical Function course is 70.

## RESULTS & DISCUSSION

### Results

The development of *mobile learning* Inquiry Techniques and Tactics in the Intelkam Technical Function Course is based on the Dick and Carey development model combined with the Hannafin and Peck development model which goes through the following stages: (1) preparation of *mobile learning*; (2) testing the feasibility of *mobile learning*; and (3) testing the effectiveness of *mobile learning*.

#### 1. Preparation of *mobile learning*

At the stage of preparing *mobile learning*, researchers go through a process that is in accordance with the development guidelines, which includes the stages: identifying learning objectives, analyzing learning, analyzing students and the context, formulating performance goals or specific learning objectives, developing assessment instruments, developing learning strategies, developing and selecting learning materials, designing and implementing formative evaluations, revising learning, and designing and implementing summative evaluations.

From the series of processes, a number of changes were obtained for the product being developed, such as: material aspects, design aspects, curriculum aspects, and program aspects; as in the example below.



Figure 2. Example of Product Display

#### 2. Testing *Feasibility mobile learning*

*prototype* of the development of *Mobile Learning* for Techniques and Investigative Tactics in the Intelligence and Security Technical Functions Course for Police Academy Cadets has been *reviewed* by three experts and has been revised by the developer according to the advice of the experts before being tested and implemented to Police Academy Cadets. *This review* from experts aims to assess the feasibility of the product in the *Mobile Learning* Material Technique and Investigation Tactics based on the material aspects assessed by material experts, instructional design aspects assessed by instructional design experts, and media aspects assessed by media experts.

Based on the results of the feasibility assessment by learning material experts through collected questionnaires, the percentage score of the eligibility level of *mobile learning* was 96.25% in the "very feasible" category for use in learning the Intelligence and Security Technical Functions Course for Police Academy Cadets.

The results of the feasibility test assessment by instructional design experts, obtained a feasibility percentage score of 80%. Thus, due diligence by learning design experts from the learning and material aspects considered "feasible" to be used in learning the Intelligence and Security Technical Functions Course for Police Academy Cadets.

The final feasibility test is conducted by media experts. The average score of the feasibility test *mobile learning* by media experts is 91.66%. Based on the calculation of the results of the media expert's eligibility, the development of *mobile learning* from the display aspect, the program / compatibility aspect as well as the language and communication aspects is considered "very feasible" to be used in the learning of the Intelligence and Security Technical Functions Course for Police Academy Cadets.

In addition to the due diligence by the experts above, the due diligence is also carried out on Police Academy Cadets through techniques; one to one (*one to one trial*), small group test (*small group*), and field test (*field test*).

(*One to one trial* *one to one trial*) was carried out on three randomly selected cadets, namely Taruna A, Taruna B, and Taruna C to assess the feasibility of *mobile learning* through aspects: learning, display, and program. Through a questionnaire given to the three of them, it can be presented as follows.

**Table 3.** Recapitulation of the Feasibility Assessment *Prototype Trial One to One*

Aspect	Total Score	Ideal Score	Percentage of Achievement (%)
1	2	3	4
<b>Learning</b>	18	20	90.00
<b>Views</b>	18.33	20	91.67
<b>Programs</b>	18.67	20	93.33

Based on the recapitulation of the feasibility results, *one to one* it can be concluded that the development of *mobile learning* from the learning aspect, the display aspect and the program / aspect compatibility is considered "very feasible" to be used in learning the Intelligence and Security Technical Functions Course for Police Academy Cadets.

The test group (*small group trial*) was conducted to eight cadets were selected *randomly*. To assess product feasibility, the eight samples were given the same assessment instrument as the one-to-one feasibility test sample. From the small group test, the following results can be conveyed.

**Table 4.** Recapitulation of Feasibility Assessment of *Prototype Trials Small Group*

Aspect	Total Score	Ideal Score	Percentage of Achievement (%)
1	2	3	4
<b>Learning</b>	16.63	20	83.12
<b>Views</b>	17.75	20	88.75
<b>Program</b>	17.50	20	87.50

Based on the summary of the results of the eligibility of the *small group*, the development of *mobile learning* from the learning aspect is considered "feasible", while based on the appearance and program / compatibility aspects it is considered "very feasible" to be used in learning the Intelligence and Security Technical Functions Course for Police Academy Cadets.

The final feasibility test was carried out on 1 class of cadets for Akpol Level III, through field tests conducted on 30 cadets. With the same aspect of assessment, the following information is obtained.

**Table 5.** recapsFeasibility Assessment **Prototype Trial Field Trial**

<b>Aspect</b>	<b>Total Score</b>	<b>Ideal Score</b>	<b>Achievement Percentage (%)</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Learning</b>	17.07	20	85.33
<b>Display</b>	17.37	20	86.83
<b>Programs</b>	16.90	20	84.50

Based on the recapitulation of the results of the feasibility of the *field trial* , the development of *mobile learning* from the learning aspect and the program aspect is considered “feasible”, while based on the display aspect it is considered “very feasible” to be used in learning the Intelligence Technical Functions Course for Police Academy Cadets.

### 3. Testing *Effectiveness mobile learning*

effectiveness of *mobile learning* in the Material Techniques and Investigative Tactics of the Intelkam Technical Function course based on learning outcome tests which are used as indicators of the achievement of learning objectives. The achievement of learning objectives based on the test scores of Taruna learning outcomes is interpreted according to the Minimum Score Standard for Tk III Cadets of Knowledge, namely with a value of  $\geq 65$ . The drawing of conclusions regarding the effectiveness of learning using *mobile learning* is with a value of  $\geq 70$ . The list of assessment for the Taruna learning outcomes test is shown in the table below:

**Table 6.** Assessment of Taruna Police Academy Cadets Learning Outcomes Test

<b>No.</b>	<b>Value of</b>	<b>Interpretation</b>	<b>Taruna No.</b>	<b>Value</b>	<b>Interpretation</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>01</b>	100	Effective	16	92	Effective
<b>02</b>	100	Effective	17	96	Effective
<b>03</b>	100	Effective	18	96	Effective
<b>04</b>	80	Effective	19	96	Effective
<b>05</b>	72	Effective	20	88	Effective
<b>06</b>	100	Effective	21	88	Effective
<b>07</b>	88	Effective	22	92	Effective
<b>08</b>	72	Effective	23	72	Effective
<b>09</b>	84	Effective	24	92	Effective

<b>10</b>	76	Effective	25	92	Effective
<b>11</b>	80	Effective	26	88	Effective
<b>12</b>	76	Effective	27	100	Effective
<b>13</b>	80	Effective	28	96	Effective
<b>14</b>	80	Effective	29	100	Effective
<b>15</b>	88	Effective	30	80	Effective
<b>Average average = 88.13</b>					
<b>Interpretation = Effective</b>					

Based on the learning outcome test assessment table, it is obtained data that learning using *mobile learning* materials in Investigation Techniques and Tactics has been effective.

## **DISCUSSION**

1. Development of *Mobile Learning* for Technique Materials and Investigative Tactics in the Intelligence Technical Functions Course for Police Academy Cadets The development of *mobile learning* materials for Investigative Techniques and Tactics in the Intelligence Technical Functions course for Police Academy Cadets uses the Dick and Carey development model combined with the Hannafin and Peck development model. The development stage is adjusted to the systematic development stages of the two models. This stage includes the identification of learning objectives, analysis of learning, analysis of students and context, formulating test work objectives or specific objectives, developing assessment instruments, developing learning strategies, developing and selecting learning materials, designing and implementing formative evaluations, designing summative evaluations, and teaching revision. This development model is also combined with the Hannafin and Peck product development model at the stage of developing learning materials in the form of *mobile learning* learning materials for the Technical Intelligence Function for Police Academy Cadets.

The identification stage of learning objectives, analysis of learning and analysis of students and context is a process for determining learning needs. Furthermore, the results of this learning needs analysis are used to formulate performance or specific learning objectives, develop assessment instruments to develop learning strategies.

In this development research, needs analysis activities have been carried out by means of interviews with lecturers and distributing questionnaires to National Police Cadets. Based on the results of the needs analysis, it was obtained data that the Intelligence and Security Technical Function course was one of the subjects considered difficult by Akpol Taruna. This is influenced by the background of Taruna who do not have basic knowledge of the Police, including terms in the intelligence sector that still sound cloudy for Akpol Taruna. Another factor that influences is the lack of interest of cadets in studying the Technical Intelligence Function course, which is caused by the lack of interest in the teaching materials used during the learning process. The teaching material is still in the form of a textbook with minimal illustrations to clarify the material on the Technical Intelligence Function. Meanwhile, cadets also do not have the opportunity to look for other learning sources, because of the limited use of laptops and *smartphones* during the face-to-face learning process. Based on this, the researcher chose to develop *mobile learning* in the Technical Intelligence Function course,

especially in the Material of Technique and Investigation Tactics in the form of an android application which is expected to be a solution for cadets to be able to easily access the Technique and Inquiry Tactics material anytime and anywhere. .

The process of developing products *mobile learning* in the Technique and Inquiry Tactics material for the Intelkam Technical Function course has gone through the stages according to the Dick and Carey development model combined with the Hannafin and Peck development model. This development goes through the design stage, the development and implementation stage and the evaluation stage. The development and implementation stages involve material experts, instructional design experts and media experts to provide assessments and input regarding products *mobile learning* the developed. The results of the suggestions and input given by these experts have then been revised on the product in accordance with their suggestions and input. After the product revision process, a trial was carried out on the National Police Academy which included *one to one* trials and trials *small group* to assess the feasibility of the product if used in the learning process.

## 2. Feasibility of *mobile learning* material on Techniques and Investigative Tactics in the Intelligence and Security Technical Function course for Police Academy Cadets

The results of the feasibility analysis of the material aspects assessed by material experts, after being converted to the conversion table in the table, the percentage level of achievement is 96.25% which is included in the qualification "very high. feasible" so that it is feasible to use with the necessary revisions to the material aspects. The result of the percentage of the material expert's assessment, based on each aspect, was concluded that the learning aspect with a percentage of 97.57% was in the "very feasible" qualification, while the material aspect with a percentage of 95.00% was in the "very feasible" qualification. Based on these data, it can be concluded that from the material aspect, the product *mobile learning* developed is very feasible to be tested on Police Academy Cadets.

The results of the feasibility analysis of the instructional design aspects assessed by instructional design experts after being converted to the conversion table in the table, the percentage of achievement level is 80% which is included in the qualification "feasible" so it is feasible to use by making several revisions to the instructional design aspects according to suggestions and input. The result of the percentage of instructional design expert's assessment, based on each aspect, is the conclusion that the learning aspect with a percentage of 82.50% is in the "proper" qualification, while the material aspect with a percentage of 77.50% is in the "proper" qualification. Based on these data, it can be concluded that from the aspect of learning design, the mobile learning product developed is feasible to be tested on Police Academy Cadets after revisions are made according to the advice and input of instructional design experts.

The results of the feasibility analysis of the media aspects assessed by media experts after being converted to the conversion table in the table, the percentage of achievement level is 87.93% which is included in the qualification of "very feasible" so it is very feasible to use by making several revisions to the media aspects according to suggestions and input. . The results of the percentage of the media expert's assessment, based on each aspect, are concluded that the display aspect with a percentage of 92.50% is in the "very feasible" qualification, the program / compatibility aspect with a percentage of 82.69% is in the "proper" qualification, while in the aspect of language and communication with a percentage of 91.66% are in the "very feasible" qualification. Based on these data, it can be concluded that from the media aspect, the product *mobile learning* developed is feasible to be tested on Police Academy Cadets after revisions are made according to suggestions and input from media experts.

After the appraisal of the feasibility of the *prototype* development results of *mobile learning* by material experts, instructional design experts and media experts who stated that the results of the development of the product were suitable for use, the next step was to test the Police Academy Cadets. The trial was carried out in a one-to-one and small group manner before being implemented in learning activities.

The one to one trial analysis was carried out on three random cadets of level III cadets. The results of the assessment of the feasibility of the prototype for each aspect based on the one to one trial, namely the learning aspect obtained a percentage of 90.00% in the "very feasible" qualification, the display aspect obtained a percentage of 91.67% in the "very feasible" qualification, as well as the program aspect obtained a percentage of 93.33% who are also in the "very feasible" qualification. Based on these data, the *prototype mobile learning* can be qualified as excellent development results and fit for use so that it can be continued in the small group trial(*smallgroup*).

The results of the analysis of the small group trial(*smallgroup*) was given to eight cadets III level determined randomly. The results of the prototype feasibility assessment for each aspect were based on the small group trial, namely the learning aspect obtained a percentage of 83.12% in the "proper" qualification, the display aspect obtained a percentage of 88.75% in the "very feasible" qualification, and program aspect obtained a percentage of 87.50% who are also in the qualification "very feasible". Based on these data, the mobile learning prototype can be qualified as a good development result and is suitable for use, so that it can be continued in field trials.

Thus it can be concluded that the mobile learning prototype is feasible for use in learning the Technique and Investigative Tactics material for the Intelkam Technical Function course based on the results of due diligence from material experts, instructional design experts and media experts, as well as *one to one* trial results and test results. try the small group (*small group*) that was tried out on the Police Academy Cadets.

3. The effectiveness of *mobile learning* in the Technique and Investigation Tactics material in the Intelligence and Security Technical Functions course for Police Academy Cadets to

measure the effectiveness of *mobile learning* in the Inquiry Technique and Tactics material in the Intelligence Technical Function course based on learning outcome tests which are used as indicators of the achievement of learning objectives. Based on the results of the learning outcomes test of 30 cadets of AKPol level III, it shows that all cadets obtained a score above the Minimum Score Standard for Tk III Cadets of Knowledge, namely by obtaining a value of  $\geq 65$ .

The average value obtained by Taruna on the test of learning outcomes in Engineering and Inquiry Tactics is 88.13 is much higher than the standard minimum score for Tk III cadets of knowledge. Based on this, it can be concluded that the achievement of the learning outcomes of the Technique and Inquiry Tactics material using *mobile learning* has been effective because the average value of the learning outcomes achievement is higher than the minimum standard value of Gatra of Knowledge for Tk III cadets.

## CONCLUSION

1. Development *Mobile learning* has been implemented through a series of stages based on the Dick and Carey development model combined with the Hannafin and Peck development model. The development is carried out through the test stage of material experts, instructional design experts and media experts and then revisions are made to the product in accordance with the suggestions and input of these experts. Furthermore, trials were carried out *one to one* trials and *small group* to assess the

- feasibility of the product being developed, as well as the *phasefield trial* which aimed to test the effectiveness of the Inquiry Technique and Tactics using *learning mobile learning*.
2. The feasibility test of the *mobile learning* material for Investigative Techniques and Tactics in the Intelligence and Security Technical Function course for Police Academy Cadets is carried out through *expert reviews* by material experts, instructional design experts, and media experts, which are then tested on cadets through *one to one trial* and *small group trial*. The results of these trials concluded that the product *mobile learning* of the Technique and Investigative Tactics material in the Intelligence and Security Technical Functions course for Police Academy Cadets developed was suitable for use by Taruna in the learning process.
  3. To test the effectiveness of the use of mobile learning, it is measured by carrying out a test of learning outcomes on the Material Technique and Investigative Tactics in the Intelligence and Security Technical Functions course for Police Academy Cadets by setting the standard of effectiveness based on the minimum value standard for Tk III cadets of knowledge. The average value of learning outcomes obtained by cadets is 88.13 which has exceeded the minimum value standard for Tk III cadets of knowledge. Therefore, the use of *mobile learning* in the Material Technique and Investigative Tactics in the Intelligence and Security Technical Functions course for Police Academy Cadets has been effective.

Follow-up suggestions that researchers can convey related to this development, namely:

1. It is recommended for practitioners / researchers who will conduct similar research as a reference or reference in research on the development of *mobile learning* for official school students.
2. It is recommended for other researchers to continue this research at an equivalent level, namely official schools with different subjects and more diverse materials.
3. As an innovative form of learning for Akpol lecturers and cadets by utilizing technology, especially on devices *mobile* as a learning resource.

## CONFLICT OF INTEREST

Based on the policies that have been established in the publication of research results through the Journal of Educational Technology, the authors hereby state that there is no conflict of interest whatsoever from either the researcher or the journal manager in the process of publishing the article.

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