

PalArch's Journal of Archaeology of Egypt / Egyptology

DEVELOPMENT OF THE PiNTAS MODULE: ACADEMIC INTERVENTION PROGRAMME FOR LOW-PERFORMING UNIVERSITY STUDENTS

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Keywords: Module Development, Academic Intervention Programme, Low-Performing Students

ABSTRACT:

This study aims to discuss the development of PiNTAS (*Program Intervensi Akademik Siswa* or Academic Intervention for University Students Program) Module to enhance and improve the achievement motivation, learning skills and academic performance among low-performing university students. As many as 10 respondents comprising of low-performing first year university students (GPA of less than 2.5) from various fields of study selected from three public universities were involved. The validity of the PiNTAS Module was reported at a high level of 89.00 based on analysis by nine expert evaluators. While the reliability of PiNTAS Module recorded the value of Cronbach's Alpha above 0.70 which is 0.908. The evaluation process is determined based on the responses from the respondents who underwent module-based sessions throughout the course of this research study. In other words, the level of reliability of a module built is high, when a client (respondent) is able to master the objectives that have been set and successfully follow the steps in each activity of the module. According to Sidek and Jamaludin (2005), the evaluation of the effectiveness of the construction of a module can be done in two ways namely; (i) create item questions based on module construction objectives or (ii) item questions are constructed based on the activities implemented based on the module. As a conclusion, the process of building a complete module requires detailed evaluation and explanation so that the module built can have the best impact on the target group.

INTRODUCTION

The development and evaluation of PiNTAS Module is developed to enhance and improve the academic achievement and motivation of student achievement in universities. They consist of students from various fields of study, who obtained a CGPA achievement grade of between 2.0 to 2.5 in the semester examination for the 2019/2020 academic session. Module PiNTAS development procedure refers to the module development model that has been developed by Sidek and

Jamaludin (2005). His module covers various aspects that are felt to be necessary as support systems for the students involved such as guidance, counselling, motivation, learning skills, resilience and mentoring. Each element is strategically arranged within the framework of the module so that student development and achievement can be worked on effectively. This module can be conducted by counselors and facilitators on a scheduled basis according to compiled phase. This module can be used for individuals individually or in groups according to the counselor's assessment. The Student Academic Intervention Program (PiNTAS) is a project pioneers to be implemented at Universiti Sains Malaysia.

OBJECTIVE

This module is built based on the concept of helping and guiding low-performing students in their learning. Low performance appraisals are measured from their achievement in the final exams each semester. This module aims to help counselors and facilitators improve the academic performance of the students involved through organized work and planning. Generally, students who get a placement in a public university is categorized as outstanding and great student in academic achievement at school or matriculation level and so on. There are still issues related to students failed at university level due to low academic achievements. This affects the future of the student itself because failure in university learning means that they do not have the opportunity to get a degree as a symbol of their own success and the pride of their family. The same situation applies to other higher education institutions. Those who failed academically in higher learning institutions will feel themselves as a failure and unsuccessful to shape their future. Efforts need to be made to help these group of students identify the cause of the decline in their academic achievements and address their problems systematically.

In particular, this module aims to:

1. Provide guidance for counselors and facilitators in conducting academic intervention programs efficiently and systematically to low-performing students.
2. Coordinate the steps and activities carried out in PiNTAS Module as supporting continuity between activities and movements arranged to follow module framework.
3. Be a source of reference for counselors and facilitators to conduct intervention programs in handling students with low performance issues in Malaysian higher learning institutions.

LITERATURE REVIEW

According to Rusell (1974), the term module is defined as a teaching package related to a unit of concept of a particular subject, which aims to provide individual teaching and enable a student to master one unit of subject content before moving on to another unit (Jamaludin Ahmad & Mohamad Safuan Rosli,

2013). Jamaludin Ahmad (2001) defines a module as a unit of teaching and learning that discusses a particular topic systematically and sequentially, to facilitate the target group involved to gain knowledge or learn on their own. It is so that these people (target group) can master a learning unit easily and accurately and effectively. Meanwhile, Sharifah Alwiah Alsagoff (1981) gives the meaning of the module as a small part that is distinctive, complete and closely related between one small part and another small part (Nurul Fatin Muhamad Arsad, 2013). Based on a study conducted by Jamaludin Ahmad and Mohamad Safuan Rosli (2013) on the effectiveness of the use of motivational modules of Institutions of Higher Learning (IPT), motivational module is a module based on various activities that involve students towards increasing productivity, achievement, enthusiasm and lasting awareness. The construction of activities in a motivational module for individuals or target groups in a program implementation is based on the need to motivate them towards more excellence in all aspects such as physical, emotional, spiritual and intellectual. This module is effective to be applied in line with the purpose and objectives that have been backed up (Jamaluddin Ahmad, 2008). Jamaludin (2012) argues that in the context of a module that focuses on the target group that involves the student agent as the recipient, that is, the agent who receives the content of a module, then the module to be implemented should be handled by mentors such as counselors, teachers, facilitators or moderators. Morrison, Ross, Kalman & Kamp (2011), on the other hand, the use of modules is seen to motivate an individual student, especially those who are within the age range of children because the content includes teaching materials centered on the student. The construction of module-based activities will usually emphasize individual-centered teaching and learning by building knowledge based on an individual's existing capabilities and initiatives (Aliza Ali & Zamri Mahamod, 2016). Sidek Mohd Noah & Jamaluddin Ahmad (2005) explained that the construction of an effective module needs to take into account the appropriate process (rules), so that the content of the module to be produced can have a good impact on the target group of researchers. An effective module is when the target group (respondents / clients) who participate can follow all the aspects presented in the module until the end of the implementation of the module, then successfully achieve the objectives they have set. They not only benefit from the intervention process carried out, but also the success of a module when the target group applies the module method in their daily lives.

THEORETICAL STUDY OF PiNTAS MODULE

Sidek Module Development Model is used as the basis for the development and construction of this PiNTAS Module is because of the module development procedure which emphasizes the training or academic aspects (Sidek Mohd Noah & Jamaluddin Ahmad, 2005). The suitability and selection of Sidek Module Construction Model for this module program is also its implementation that is more focused on the aspect of counselling and is very suitable for the normative population of the Malaysian society itself (Amalia Madihlea & Sidek Mohd Noah, 2013). The module construction process proposed through the Sidek Module

Development Model involves the phase of preparing the draft module which is the process of preparing and writing and the phase of trying and evaluating the module i.e. the process of being ready to be evaluated including validity and reliability tests (Norhasnira Ibrahim, et. al., 2014; Amalia Madihiea & Sidek Mohd Noah, 2013). If these two phases get good results, then the module development process is classified as complete and ready to be applied as the targeted objectives. Meanwhile, if the module built has a problem, the researcher needs to re-evaluate the module starting from the content selection stage and re-follow each step until the value of validity and reliability achieve good results. The following figure shows the complete module development procedure proposed in Sidek Module Development Model (2001).

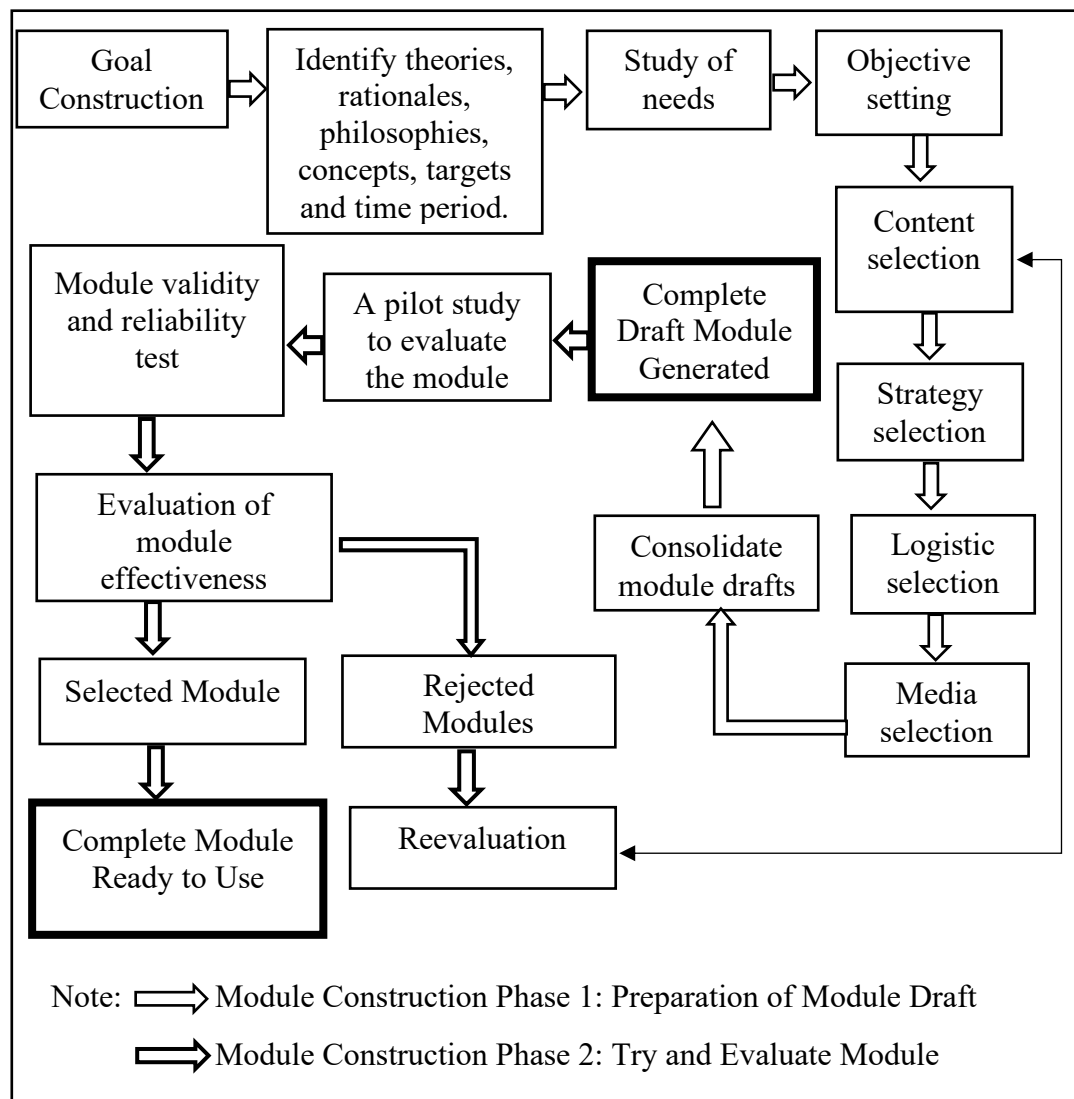


Figure 1 Sidek Module Development Model (2005)

Source: Sidek Mohd Noah & Jamaludin Ahmad. (2005). *Pembinaan Modul: Bagaimana Membina Modul Latihan dan Modul Akademik*. Serdang: Penerbit Universiti Putra Malaysia.

DEVELOPMENT OF PiNTAS MODULE

Process 1: Setting a goal

The goal of building this module is a special intervention measure for students in public universities who face the problem of low academic achievements. This module also aims to be a tool that can provide and increase the achievement motivation of an individual student. In the process of goal development, the results of needs analysis are used to identify the theme of the needs of a module or activity in the module. For example, the results of the needs analysis show that the construction of a module requires the integration of theory and practice to explain the content of the module activities so that the goals built lead to the theme of the study. Thus, the focus of the construction of PiNTAS Module is to help and guide pre-graduates in any field of study at the Bachelor's Degree level in public universities, who get CGPA 2.0 to 2.5 examination result grades, to improve their achievement grades through this intervention program.

Process 2: Identify theory, rationale, philosophy, concept, target and time period.

This process involves the identification so that the selection of intervention measures to be carried out is appropriate to measure the problems of the study constructed. The process of identifying the theory is important so that it can be integrated into an effective module to the target group. In addition, the selection of these theories presented will act as an explanation to the measurement of each of the variables that have been identified. In the context of this module, the researcher found:

a) Theory – PiNTAS Module makes McClelland (1961) Achievement Motivation Theory the main backbone in discussing the effectiveness of activity modules on achievement motivation among public university students. The effectiveness of the activity module built focuses on the achievement of students selected as respondents of the study, thus emphasizing that the motivation of individual achievement is closely related to the internal and external motivations that shape changes in a person's behavior.

b) Rationale – PiNTAS Module is aimed at guiding and helping students who have lost their motivation due to failure in achieving good academic results while in their study period.

- c) Philosophy - Each activity created in this module is built on the philosophy that is appropriate for the goals to be achieved in the study respondents involved.
- d) Concept - This module is built to focus on three main phases namely; Detection, Recovery and Empowerment. This concept helps students to identify real issues that hinder their academic progress. Once the actual issues are identified then the recovery process through counselling interventions is implemented. While guidance, advice, mentoring and other sessions will be implemented continuously to enable the true potential of the student to be seen.
- e) Target - Pre-Graduates (students) first year of study at Malaysian public universities, who get academic results at grade CGPA 2.0 to 2.5 through 3 selection methods either voluntarily, referred through lecturers or academic advisors and tracking through the record system from respective university study centers.
- f) Time Period - Each meeting session between the counselor and the client involves a period of time between 60 - 90 minutes according to the client's needs. These sessions are scheduled to take place once a week until the end of six counselling sessions based on the intervention plan and client agreement.

Process 3: Significance of the study

The significance of the study component is to identify the needs of module construction. In this study, the needs study was done through two methods, namely through literature review and initial interview with the students themselves. The results of the needs study analysis found that there is a need to build modules to help low-achieving students at the university.

Process 4: Setting objectives

The researcher acts to set objectives on each activity in the module to make it easier for the client to understand the purpose of the activities implemented in each counseling session and achieve the goals at the end of the session. The setting of objectives in the construction of the module is divided into two, namely the general objective and the specific objective. The general objective is to describe the overall objectives that will be achieved in the implementation of the module. While the specific objectives are the purpose of each sub-module or activity implemented.

Process 5: Content selection

Generally, content selection will influence the objectives of each activity. Therefore, in terms of content selection of this module it focuses on the approach, solution action, application of techniques or steps built. The content in PiNTAS Module is constructed and selected based on the theories emphasized in the study such as McClelland Achievement Motivation Theory and Self-Determination Motivation Theory (SDT) because each activity is able to explain the study variables conducted.

Process 6: Selection of strategies

The choice of strategy takes into account the level of understanding of the facilitator, the suitability of the participants, the location or place of conducting the program, and the suitability of the meeting time. All these factors will be taken into account to determine the smooth implementation of the module and at the same time impact the effectiveness of the module. The module activities that are built are also systematically arranged so that the client can follow each activity carried out. The selection of strategies is a component to help the facilitator / counselor in playing the role as best as possible while making the client actively participate in the activities of the module built.

Process 7: Logistics selection

The logistics selection components include the materials that will be used in each activity, the suitability of the location of the program, namely the counselling room, facilitator training, and the safety of participants / clients. Researchers need to provide a checklist as a manual guide to ensure that logistical requirements are satisfactory and meet the criteria as set. For example, the facilitator / counselor provides drinking water in preparation for the client before beginning their counselling session.

Process 8: Media selection

The media selection component is the component that will affect the aspect of module delivery. In other words, the method of module delivery takes into account the need for activities that is a combination of several methods of delivery medium such as group training, role play, assignments, and presentation. In addition, teaching aids such as internet lines, video clips, music and power points are used to attract participants to be actively involved in each activity.

Process 9: Consolidating the draft module

Finally, the draft module that has been completed will be collected and coordinated for each activity in an organized manner. All activities are organized in a complete and orderly manner including the relevant attachments. The construction phase of the completed module draft will go through the second phase which is to try and evaluate the module.

RELIABILITY AND VALIDITY ANALYSIS OF PiNTAS MODULE

In terms of module reliability, the evaluation process is determined based on the responses from the respondents who underwent module-based sessions throughout the course of this research study. In other words, the level of reliability of a module built is high, when a client (respondent) is able to master the objectives that have been set and successfully follow the steps in each activity of the module (Aliff Nawi, et al., 2015). According to Sidek and Jamaludin (2005), the evaluation of the effectiveness of the construction of a module can be done in two ways namely; (i) create item questions based on module construction objectives or

(ii) item questions are constructed based on the activities implemented based on the module.

Then, the analysis of the reliability level results is done using the value of the Cronbach Alpha coefficient as a measure in determining the reliability level of the module. The coefficient value to differentiate the level of reliability in this module study, the researcher has selected and used the Cronbach Alpha coefficient value method at 0.6 to show the level of reliability of the module is high. This is based on Mohd Majid (2000) who stated that the value of Cronbach Alpha coefficient 0.6 is sufficient in the field of social science education to show the level of consistency of the module at a good level. Meanwhile, for reliability values that do not reach the value of 0.6, indicating that the module is in a poor level of consistency, needs to be improved and updated (Aliff Naw, et al., 2015). For the module reliability questionnaire item, the researcher has built it based on the procedure proposed by Rusell (1974) that the construction is to cover the achievement policy and goals of the client (Sidek and Jamaludin, 2005). Table 4.1 shows the overall reliability values of PiNTAS Module:

Table 4.1. Overall Reliability Value of PiNTAS Module

| Ukuran | Nilai | |
|--|--------|-------|
| Cronbach’s Alpha | 0.908 | |
| Bootsrap 95% Selang Keyakinan (Bootstrap = 1000) | 2.5 % | 0.723 |
| | 97.5 % | 0.949 |

Source: processed data

The table above shows the overall reliability value of PiNTAS Module is at a high level that is Cronbach Alpha value is 0.908. The reliability value of the PiNTAS Module has exceeded the minimum level of Cronbach Alpha value > 0.60.

According to Rusell (1974), the validity of a module refers to the accuracy of the concept and content of a constructed module. The validity process of this module is evaluated based on five main aspects, namely: (a) meeting the target population; (b) teaching situation or module implementation method is appropriate; (c) time allotted to run or module implementation method is sufficient; (d) module successful cause an increase in student achievement in the targeted aspects; and (e) modules successfully change students ’attitudes towards greater excellence (Aliff Naw, et al., 2015). In general, there are two methods in this validation process implemented, namely face validity and content validity from external critics (Aliff Naw, et al., 2015). Therefore, a module developed is reviewed by certain experts who have expertise in the field of study implemented in order to produce effective modules (Kline, 2005).

Face validity is a review process that involves aspects of module comprehension and language accuracy, with the comments given referring to the terms used,

language adaptation and improvements that are appropriate and coincide with the research phenomenon conducted. After that, the module validity assessment is evaluated through the content validity aspect to see the clarity of the content built in this module. The validity of the module content is considered good if it can measure all its contents accurately and effectively. This verification review is adapted based on Rusell's method (1974) which has five statements about the validity of the module. This set of questionnaires on the validity of Rusell (1974) module content has been translated and modified by Sidek and Jamaludin (2005). The following Table 4.2 shows the content validity analysis of PiNTAS Module:

Table 4.2. PiNTAS Module Content Validity Assessment Construct

| No | Statement Item | Expert Assessor | | | | | | | | |
|----|--|-----------------|---|----|----|----|---|---|----|----|
| | | A | B | C | D | E | F | G | H | I |
| 1. | The content of this module meets the target population. | 10 | 9 | 10 | 10 | 9 | 8 | 9 | 9 | 9 |
| 2. | The content of this module fits the application of the use of WDEP techniques in counselling sessions. | 9 | 9 | 9 | 9 | 9 | 8 | 7 | 9 | 10 |
| 3. | The content of this module corresponds to the time allotted. | 7 | 9 | 8 | 7 | 10 | 8 | 5 | 10 | 8 |
| 4. | The content of this module is easy to understand. | 10 | 9 | 9 | 9 | 10 | 9 | 9 | 10 | 9 |
| 5. | The content of this module is appropriate to identify the cause of the client's academic decline. | 9 | 9 | 10 | 9 | 9 | 8 | 8 | 9 | 9 |
| 6. | The content of this module is appropriate to address the issue of client academic decline. | 9 | 9 | 10 | 9 | 9 | 8 | 8 | 9 | 9 |
| 7. | The content of this module is appropriate to help clients rebuild academic goals. | 9 | 9 | 10 | 10 | 10 | 8 | 8 | 10 | 9 |
| 8. | The content of this module is suitable to increase the client's motivation to learn. | 9 | 9 | 10 | 9 | 9 | 8 | 7 | 10 | 9 |
| 9. | The content of this module can improve the client's learning | 9 | 9 | 9 | 9 | 10 | 8 | 7 | 10 | 9 |

| | | | | | | | | | | |
|----------------------------|---|--|------|------|------|------|------|------|------|------|
| | skills. | | | | | | | | | |
| 10. | The content of this module can help to improve client academic achievement. | 9 | 9 | 9 | 9 | 9 | 8 | 8 | 10 | 9 |
| Content Validity Value (%) | | 90 | 90 | 94 | 90 | 94 | 81 | 76 | 96 | 90 |
| Reliability Coefficient | | 0.90 | 0.90 | 0.94 | 0.90 | 0.94 | 0.81 | 0.76 | 0.96 | 0.90 |
| Average | | 89.00% (Content Validity Coefficient of PiNTAS Module) | | | | | | | | |

Source: processed data

The validity assessment of the content of the PiNTAS Module is evaluated based on the scoring of the score, namely: 1 (strongly disagree) to 10 (strongly agree). The total score evaluated by the expert (x) is divided by the total actual score (y) and multiplied by one hundred, to obtain the overall percentage of the value on each item of the validity statement.

$$\frac{\text{Total Expert Score (x)}}{\text{Total Actual Score (y)}} \times 100\% = \text{Content Validity Level}$$

Figure 2 Formula for Content Validity Achievement

Source: Sidek Mohd Noah & Jamaludin Ahmad. (2005). *Pembinaan Modul: Bagaimana Membina Modul Latihan dan Modul Akademik*. Serdang: Penerbit Universiti Putra Malaysia.

Based on Table 4.2 shows the value of content validity for PiNTAS Module is 89 percent. According to Sidek and Jamaludin (2005), a module has high content validity when each item can obtain 70% and above based on the formula shown in Figure 2. This means that the content validity of the PiNTAS Module has mastered or achieved a high level of achievement for use.

In addition, in the validity process of this research module, a total of nine module evaluators were selected to obtain validity of the module built. All selected experts have read, researched, reviewed and provided views and suggestions for improvement on the modules built.

CONCLUSION

In conclusion, the process of building a complete module requires detailed evaluation and explanation so that the module built can have the best impact on the target group. This paper as a whole has explained how the steps and processes that needs to be implemented in producing quality counselling modules in line with the set of objectives. Assessment from experts based on the prescribed format further enhances the effectiveness of the module to be applied to the group

of university students targeted by researchers. The PiNTAS Module is found to be validated and reliable with high values. This module will be beneficial for low performing university students to enhance and improve their achievement motivation, learning skills and academic performance. This article has further explained on how this academic intervention programme could help these university students.

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