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# Using CRM Tools for Learning Development – The IPMA-Student Portal Example

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**Abstract**

The aim of the paper is to analyse the possibilities of using IT tools supporting education for customer relationship management on the example of IPMA-Student Portal. The tool was created to support partner universities and their students in the development of competencies and certification in project management; however, by way of putting it to use, collecting information about users, and communicating with them, the tool can be treated as a means of strengthening and improving relationships with universities and students. The IPMA-Student Portal is a basic communication tool, adapted to the needs of lecturers and students, bringing benefits both to the IPMA Poland Association and the academic community.

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**1. Introduction**

Recent years have seen significant changes in the market situation, driven by increasing competition, globalisation of the economy, rising customer expectations resulting from increasing awareness, and new technologies. These changes make the subject of consumer behaviour one of the most interesting issues today. In a changing environment, one of the most valuable assets of any enterprise is the customer and knowledge about them. Professional associations that base their activities on promoting the idea of good practices in individual industries, companies,

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institutions and other entities across the country have noticed the need for contact with universities, which shape competencies of young people. These organisations affiliate the education system, offer student certification systems and support in contacts with the business environment. These activities are an attempt to establish relations with the generation entering the labour market. The aim of the paper is to analyse the possibilities of using IT tools supporting this kind of education activity for customer relationship management on the example of IPMA-Student Portal. That is basic foundation for effective functioning in the market is customer relationship management (CRM).

## 2. IPMA –Student Program

IPMA -Student Program is the result of cooperation between IPMA Poland<sup>†</sup> and universities and business representatives. In 2013, work was completed on a system of accreditation of curricula at Polish universities and the assumptions for certification of students in the field of project management. The Association, through the IPMA-Student accreditation program, offers universities the opportunity to confirm the compliance of project management curricula offered as part of undergraduate and graduate studies with the competence requirements, consistent with the global standard IPMA 4-L-C. The pilot of the Program was conducted in 2014 at the SGH Warsaw School of Economics; currently more than a dozen universities in the country have implemented and are pursuing the activities of the Program. This means that at these universities the students' learning paths have been analysed and found to be in line with the IPMA international competence model. The vocabulary used, definitions and terms related to project management are unified, and students and lecturers use common teaching tools. A network of qualified university coordinators enables students to verify and certify their competences.

It is worth noting that among the universities that have received IPMA-Student accreditation, in addition to those that merely confirmed the compliance of their curricula with IPMA-Student requirements, there are also those that have launched new programs based on IPMA-Student learning outcomes. The development of the IPMA-Student certification program is based on a periodic analysis of the requirements related to project management positions and practices as well as the requirements and considerations of higher education. The analysis is carried out by the Certification Program Committee at least once every five years.

## 3. Principles of Stakeholder Relationship Management based on the example of IPMA Student participants

The implementation of a CRM system as part of the IPMA – Student program is intended to provide specific benefits. The literature on the subject systematizes the value propositions that may come from proper management of relations with the organization's stakeholders. First of all, the effect of activities related to the implementation of CRM in the company is to be improvement of the profitability index of the organisation and its activities. Hence, the principle of using existing relationships with stakeholders to maximise revenue has been listed first. CRM class systems focus on creating tightened relationships with all partners in specific projects, which is the main objective of IPMA Poland when implementing the IPMA-Student program. The value of these partners is measured in the long term and can be increased through various group-oriented loyalty programs.

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International Project Management Association Poland (IPMA Poland) is an association of project management professionals and is a part of International Project Management Association (IPMA). IPMA is an international non-profit organization affiliating national associations in the field of project management in 62 countries around the world. The mission of the international association is to create a global space for research that shapes the future of project management. This vision is realised by promoting and supporting concentrated efforts in three areas: standards, learning and development as well as promotion of good project management practices. The main objective of the association is to build a platform for the exchange of practical experience in project management.

CRM class systems enable long-term maximisation of the value of partners. The costs associated with acquiring these partners for new projects are much lower than the costs of acquiring new ones. In the context of the IPMA – Student program, convincing an already acquired partner of the IPMA-Student certification program to participate in subsequent projects is much easier than searching for a new one. Establishing cooperation with a proven provider, such as IPMA Poland, in further educational or student-activating projects, e.g. certification of additional students or students' participation in competitions or academic and educational events which the university or the company wants to introduce for its students or employees, carries much less risk and is burdened with much lower costs than searching for a new provider for the task. Because long-standing relationships are mutually beneficial, organisations tend to use a lock-in strategy that results in less cost to the other party in the relationship as well. This is due to the fact that this strategy involves deliberately raising the costs that the stakeholder has to pay if they would like to change relationship partners. The commitment of time and energy spent by the partner on previously building this relationship is so high that it is not worthwhile for them to build a new one.

The principle of using knowledge about customers to serve them at a consistently high level is firmly established in the CRM philosophy. According to the authors, observing it has the greatest impact on maintaining the organization's competitive advantage in the long term. Properly selected CRM allows you to surprise your partner with your knowledge about them. In addition, thanks to an efficient CRM system, all departments within the organization know about all interactions taking place in the organization's relationship with the partner. Stakeholders are therefore not "plagued" with requests for the same information coming from different points of contact between the organization and the partner. Over time, the knowledge gained by the organization allows to individualize the cooperation and make the partner "permanently" attached to it.

Developing repeatable processes of cooperation requires the use of knowledge about transactions to date in subsequent contacts with new and existing partners. Effective use of CRM class systems means that the company's stakeholders can always count on consistent, reliable and accurate answers to their questions. This perspective on the relationship positively impacts its value. Delivering value and increasing partner loyalty have many benefits. Firstly, we know more about loyal partners. With this knowledge, we can resolve troublesome issues before they become problems. Secondly, we can suggest solutions in areas that present challenges to the partner that they are not yet aware of. Presenting partners with needs they are not yet aware of is another CRM principle. Knowing these principles and applying them in the process of managing relationships with partners is essential if CRM systems are to be properly used in the organization.

#### **4. Goals of using CRM class systems**

When defining the CRM philosophy, it is well-based to identify the objectives pursued by the organization that has or intends to implement a CRM class system. It should be emphasized that because of the fact that the orientation of an organization such as IPMA Poland on an individual approach to its partners should appear already at the stage of creating a vision and mission along with a strategy of action, also the objectives that the CRM class systems face should be defined at this stage. Their definition is the responsibility of the management, while the implementation belongs to the entire team. According to J. Adamczyk, the goal of CRM "should be to increase the value of the relationship for the customer, with visible benefits for them, and at the same time with a profit for the company." In order to meet the needs of partners which may be for example universities or students, the organization using CRM system should first fully identify these needs and then strive to meet them. The purpose of CRM, based on the definition of "partnership and loyalty", is to maintain partnership relations with all stakeholders of the company as well as to skilfully cultivate them and repeat the implemented processes in mutual contacts. It should also be considered as the goal of CRM to increase the profit level of the organization by multiplying the number of loyal stakeholders while at the same time evoking the greatest possible satisfaction in them. This makes it possible to maximize their value. Finally, the goal that is most often mentioned in the literature is by definition focus on customer satisfaction.

Since it is possible to determine the objectives to which the implementation of a CRM system in the

organization should lead, it is reasonable to identify exemplary metrics for achieving the objectives of the CRM implementation project. Sample measures proposed by the authors are presented in Table 1. It should be remembered that achieving these goals will not be possible only through the purchase or independent development of CRM class software. The information technology itself can be only one of the areas in which to create relationships with the customer. To achieve success, it is necessary to change the mindset of the entire organization in accordance with the CRM philosophy.

<i>Breakdown by</i>	<i>Characteristics of a sample metrics</i>
<i>employees' skills</i>	<i>number of incorrectly entered order documents</i>
<i>perception of the organization</i>	<i>time from initiating contact with a client to closing the transaction</i> <i>market share</i>
<i>the process and its results</i>	<i>duration of contact between the company representative and the customer</i> <i>value of the signed purchase order</i>
<i>time</i>	<i>number of meetings with a partner counted on an ongoing basis</i> <i>total value of a partner, i.e. the value of actual or potential transactions</i>
<i>past/future</i>	<i>increase in turnover (relative to future periods)</i> <i>increase in market segments</i>
<i>level of partner loyalty</i>	<i>company's share of transactions carried out by a partner in a given industry</i> <i>percentage of repeat customers</i>
<i>customer value</i>	<i>revenue from a given partner over a specified period of time</i> <i>profitability transactions with a partner over a specified period of time</i>
<i>financial/non-financial metrics</i>	<i>the margin achieved from the relationship with a given partner</i> <i>partner satisfaction measured and tracked through interviews and surveys</i>

Table 1. Metrics of CRM goal achievement

Source: Own study based on K. Stefaniak, *Goals and metrics in CRM project*, "Manager" 2001, no. 2, p. 18.

In view of the above, the understanding of CRM philosophy should become easier upon getting acquainted with the architecture of IT tools. In the case of the IPMA Student program, the tool for cooperation and communication between partners is the IPMA-Student Portal. This tool is based on the Moodle platform.

## 5. Moodle-based IPMA Student platform as a CRM tool

Moodle (Modular Object Oriented Dynamic Learning Environment ) is an online platform for teaching and learning. In more official language, it is a Content Management System (CMS) specialised in e-learning. Currently, the most popular educational content management system is Moodle. It is a very flexible, user-friendly, safe and, above all, free platform designed for remote teaching. It is widely used by schools, universities and companies. The first version of the platform was released in 2002. Currently, the project is being built by a wide group of people and funded by a network of institutions keen to see it gain steam. From the moment it is installed on a server, Moodle is equipped with features such as a grade book, calendar or modules for quick knowledge checks and file uploads.

The Moodle platform is an online remote learning environment available in web browsers. It enables the creation and administration of online courses - thus managing the entire process of remote learning. It is a development project aimed at supporting its didactic and methodical aspect of education. Currently, it is used in more than 215 countries across the world. The number of users and supporters of this platform has been growing steadily for years.

Gartner's research indicates that for a significant portion of CRM offerings, the promised flexibility is most often limited to the customization of menu and the ability to disable certain program functions. As a result,

customisation of CRM solutions rests on limiting the functionality of modules that are included as standard in the bundles of programs for which licences must be purchased, regardless of whether the customer will use all of the application's functions. Maximising the use of various CRM applications' functionalities is facilitated by a thorough knowledge of the systems' structure and thus the ability to adapt the CRM project to the customer's needs. This allows the organisation using the solution to avoid the multiplication of costs associated with the implementation of a "customised" system, and to rely, as is the case of the IPMA-Student Portal, on open source software. The decision-makers behind the launch of the IPMA-Student Portal were aware that a system made available free of charge under the General Public License (GPL) would meet their expectations, and that any conceivable adaptation to specific requirements would be possible using already built-in functions.

Features of the Moodle platform:

- Open source software – this means that it is made available free of charge under the General Public License GPL. Everyone has access to the full source code cost-free and can make required changes to it.
- Available on web browsers, does not require installation of any software on the user's computer. It only requires access to the Internet.
- Easy to use for users (especially for trainees) - basic web browser skills are required.

Modular structure – division into sections makes it organized and easy to create courses and add content to them.

In the CRM system architecture, there can be distinguished three main parts: operational, analytical and interactive. Before discussing the individual parts of CRM, attention should be called to the fact that the systems of this class should be implemented in such a way that they interact with those already existing in the organization. Hence, the presented division is influenced by practice, which has shown that ERP, MRP and other systems can still function in the organisation, and their operation is subject to the CRM philosophy, i.e. it actually becomes a part of this system. The CRM class system is a kind of a binder – it connects all the systems existing in the company and enriches them with analyses and functions allowing for better contact with the individual customer.

## **6. Analysis of the design of the IPMA Student Portal has revealed similarities to CRM class systems in several areas.**

Operational CRM covers company functions directly related to contacts with customers. It contains data on transactions or contacts made during the ordering or sales process, among others. The data refers to customers, the company's products, employees handling a given transaction as well as information about competitors. Analytical CRM processes data from operational CRM for the purpose of supporting decisions on marketing campaigns, customer segmentation, and preparing the company's strategic plans. Numerous studies, statements, articles, and definitions attest to the great interest in analytical knowledge management. Interactive CRM improves the quality of direct contacts with customers, partners, and employees of a company.

Operational CRM is, in terms of functionality, similar to ERP. The most common functions in these systems include typical business utilities: customer service, order management, sales management. In operational CRM class systems, employees' actions are supported by raw data coming from data warehouses. All data about business partners is much easier to access than if it were stored in different systems. Hence, operational CRMs are evolving to the role of systems that integrate the company's existing systems in this class. However, data analysis is only the responsibility of the employee handling this database, therefore the effectiveness of the activities depends on the experience and skills of the individual. This in turn often depends on the attitude (conservative, receptive or pioneering) of the employee towards the new system.

Unlike operational CRM, analytical CRM is a system that builds predictive models using data mining from a data warehouse. With analytical CRM, customer service employees receive a set of guidelines on how to serve customers most effectively. Thanks to analytical CRM, it is possible to categorize a given stakeholder, assign them a status from among those defined by the company, and manage knowledge about them. By using analytical CRM, marketers gain an extremely useful analytical tool. However, it should not be forgotten that in every case of implementation of CRM systems in the company, it is important that there is a need for the implication of its various elements. Therefore, the organization should first answer the question of whether in this industry, with such a method

and scale of operations, the implementation of the analytical part of CRM will be necessary. It should be emphasized that its proper functioning depends on the resources in the data warehouse, which compiles data and facilitates access to it. The analyses used by the analytical CRM include RFM or LTV, among others. RFM allows for clustering stakeholders based on their past behaviour and predicting their future behaviour. LTV makes it possible to estimate the profits that can be achieved by maintaining contact with a given partner.

Both analytical and operational CRM are designed to aid the organization in serving its stakeholders effectively. From the management's point of view, of which usually only a representative is a member of the CRM implementation team, the most important thing is the system's usability features, not its design. Among the systems of this class, there can be distinguished the most essential areas, functions and modules. In the substantive aspect it is the management of partners, contacts and opportunities – all these functions are included in the subsystem of gathering knowledge about partners. Others that qualify as elements of the partner care subsystem are sales management, process definition, contact centre, customer service, and task assignment. In terms of functions, on the other hand, CRM is used to gather knowledge about existing and potential partners, monitor their status on an ongoing basis, and assign them appropriate status based on the information gathered. Other features in the functional aspect include: preparation of an operational partner care plan and its subsequent implementation, analysis of expectations, needs and preferences as well as previous purchases, and above all maintaining contact.

Gathering knowledge in terms of a company-partner relationship allows for obtaining information on:

- the amount of financial flows – on this basis it is possible to determine the "value of the partner", the regularity of their contacts with the company, the finalised transactions;
- the type of turnover – it allows to indicate which goods or services are the subject of the transaction and, thanks to this, to improve the company's offer, strengthen the negotiating position or forecast sales and purchase opportunities;
- the phase and style of the partner's operations – this determines the method of negotiation, the partner's needs and their reactions; a newcomer to the market behaves differently from an established partner. The partner care subsystem works by leveraging the acquired knowledge about them and allows the company to increase its competitiveness in dealing with the partner by:
- automating the process of conducting marketing campaigns and contacting partners;
- acquiring and memorizing individual feedback that allows to avoid repeating the messages addressed to the partner and to prevent "harassing" them;
- measuring partner satisfaction on an ongoing basis and identifying areas for improvement in company operations;
- defining processes.

Not all of the functions listed may be necessary for an organization that intends to implement the CRM philosophy. Hence, it is extremely important to properly implement a CRM class system so that it is "tailored" to the customer's needs. In this context, it should be noted that the elements incorporated in the IS Portal indicate that it can be treated as a CRM class tool.

Moodle functionality in the context of IPMA-Student certification

The Moodle system allows for:

- defining system users with specific privileges,
- creating a database of open and closed questions assigned to the elements of competencies according to ICB4,
- generating from the question database an examination set (quiz) with a structure defined by IPMA ICR 4 (IPMA International Certification Regulations),
- evaluating answers to closed questions, automatically,
- exporting results to Excel for further processing,
- professional assurance of exam system security and data protection,
- continual monitoring and improving the question database,
- communication with users,
- archiving of all or selected elements of the system.

The IS Portal is a tool used for teaching support, examination and contact with lecturers, students and postgraduate students. The tool was created in 2014 as part of the ongoing IPMA-Student project. The IS portal has been created on the Moodle Platform. The different functionalities of Moodle have been adapted to the needs of the stakeholders of the IPMA-Student project.

## 7. User Management

User management on the IS platform includes both the creation of user accounts and the granting of global rights to system functionality, and the granting of user rights to individual quizzes. The IS platform uses a mechanism for user account authentication through standard e-mail verification. A person with their own account can log into the system. It is also possible to log in as a guest, i.e. an unregistered user who has limited access to the platform resources. The system offers several solutions for user access to particular courses.

Users of the IS Portal can be divided into different categories:

- a. Students with individual accounts from accredited universities, who study within an accredited pathway and have access to dedicated quizzes,
  - i. Students who use dedicated (didactic) quizzes, i.e. those who are still considering the decision to enter the certification,
  - ii. students using both the dedicated (didactic) quizzes and the IPMA-Student exam – i.e. those who have made the decision to take the certification exam and have paid the exam fee.
- b. Individuals who have created an account on their own and are only using the demo quizzes that are publicly available.
- c. Trainers – university teaching staff who teach accredited classes/subjects,
- d. IPMA-Student Coordinators at universities – individuals from a particular university who are responsible for the implementation and execution of the teaching and communication processes between the HEI and IPMA Poland,
- e. Assessors of the IPMA Accreditation Committee.

## 8. Evaluation Tools

The IS portal is used as a tool to assess student performance in individual courses.

There are 3 categories of courses:

- Courses based on the competency structure according to ICB3,
- Courses based on the competence structure according to ICB4,
- Dedicated courses created for special training needs of IPMA and partner universities.

In each category there have been created 3 courses:

- DEMO – courses generally available to all users that are publicly accessible,
- AJS – training courses created for users from partner universities. The courses include tests on different types of project management competencies. They are used as a teaching tool. The so called dedicated courses, developed on request of the university, are also in this group. Among dedicated courses there is, among others, the PRE / POST test for examining the effectiveness of the training.
- CERT – courses created from certification questions and used for examinations. The "IPMA-Student Certification Process Evaluation Survey" is also included in this group of courses.
- In addition to the DEMO and DEDICATED (AJS) quizzes, the Portal includes a project management knowledge game ("Millionaires", approx. 300 attempts in 2021).

The number of users for each course is shown in Figure 1. Each course is comprised of: a test (exam), tests in selected areas of competence, Discussion Forum, News Forum, document repositories (training materials).

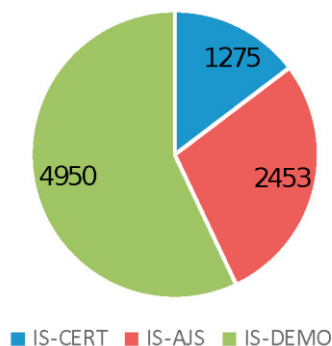


Figure 1. Users of particular courses on the IPMA-Student Portal

Source: Own study

Outcome assessment of quizzes is automatic. Users of the training quizzes receive information about the final score and additionally feedback explaining the correct answer. The evaluation of the certification exam score is provided to students in the form of a report. The results report includes an assessment of each of the 28 ICB4 IPMA competency elements, the percentage of competencies passed, and the decision on awarding the IPMA-Student certificate.

The format of the report allows the candidate to identify their weak and strong competencies, which can be a rationale for developing their competencies. The report with the assessment of the certification exams results for groups of students from each university is delivered to the coordinator at the respective university. From the perspective of the organizer of a training cycle preparing for certification, the feedback on the level of competence of the trained group in each element of competence is an objective indicator of the effectiveness of training, and provides a premise for the verification and development of training programs and coaching staff in areas that require additional support.

## 9. Communication

Discussions are an integral part of the IPMA-Student Portal. Communication takes place either between users or groups of users, in both asynchronous and synchronous modes. News Forum (IPMA announcements) and Discussion Forum (open, anyone can submit an issue). In dedicated training courses Discussion Forums are more often in use but the issues raised are organisational rather than substantive. Forums are either part of the whole course or linked to a specific section of the course. The course author can determine who has access to the forum and who can contribute to it.

Unlike a forum, a chat is a real-time communication tool, created as an overarching course component or it is linked to a specific stage of the course. It requires participants to be logged in. The instructor can determine the chat availability to users. Chat participants can be divided up based on their membership in different groups. There is also a messaging system in Moodle – the Messages module – that sends text messages to all users of the platform. It is possible to search the list of users inside and outside the course, create a contact list and block selected users. Unfortunately, the platform does not offer e-mail accounts, as users are assumed to have their own, system-independent accounts.

In addition to the courses, there are many information resources on the portal regarding:

- News related to activities in the area of IPMA-Student Program, e.g. current activities in the area of safety policy, events dedicated to students and lecturers, successes of students in scientific and educational activities,
- such as: students who obtained the highest scores in the certification exams, winners of the Project Master competition for the best thesis in project management,
- IPMA Poland – activities undertaken by the association,
- IPMA Certification – information concerning IPMA certification requirements,



- Certification Guides – a set of documentation related to the IPMA-Student certification requirements, IPMA-Student competence model,
- Information about IPMA-Student Partners (accredited universities) – information includes a list of accredited universities, basic information about universities and contact to the IPMA-Student coordinator from each unit.
- Recommendations given by employers and students for the IPMA-Student certification system,
- The list of individuals certified at IPMA-Student level,
- IPMA-Student projects carried out in partnership between IPMA Poland and universities.

The IPMA-Student Portal offers those who take the IPMA-Student certification the opportunity to complete an evaluation questionnaire. The questionnaire is anonymous and voluntary. The questionnaire contains questions about the usefulness of both the educational activities conducted at the university and the particular elements of the IPMA-Student teaching and certification process and tools. Based on the analysis of the results of the 300 questionnaires from students who went through the full didactic process ending with the certification, a conclusion can be drawn on the usefulness of both the didactic activities at the partner universities and the information provided on the IPMA-Student Portal as well as the certification process and support tools themselves

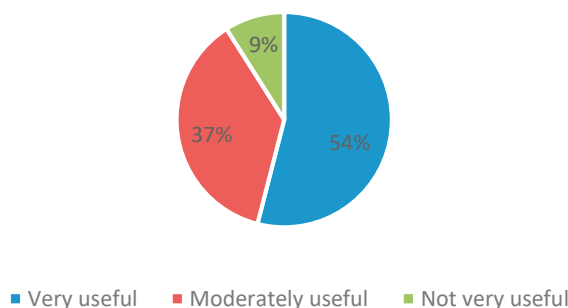


Figure 2. Classes in an accredited course

Source: Own study

Classes in accredited courses at their respective universities are rated by students as very useful or useful (Error: Reference source not found). This information is made available to the IS Coordinator of the respective university.

The IPMA-Student portal also contains guides prepared by IPMA Poland containing an inventory of methods and techniques in particular competence areas. The guides are used by both students and lecturers. The majority of students assess the usefulness of this study as very or moderately useful (Figure 3). The guides are intended to inform students how their level of competence in the various areas of project management will be verified, i.e. which methods and techniques the examination questions will refer to.

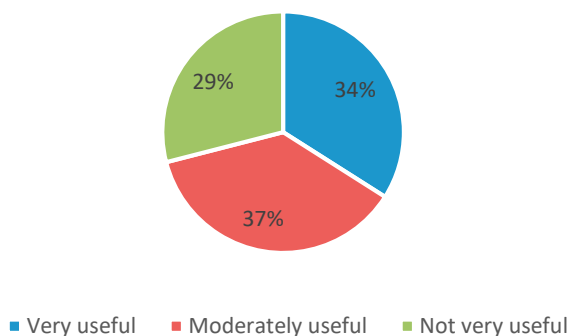


Figure 3 The Usefulness of IPMA-Student Guides

Source: Own study

Students rate teaching quizzes, offered to them for competence development, much higher than guides, containing a collection of methods and techniques necessary for the student to master. Thus, it can be concluded that a more attractive form of learning for students is the use of quizzes.

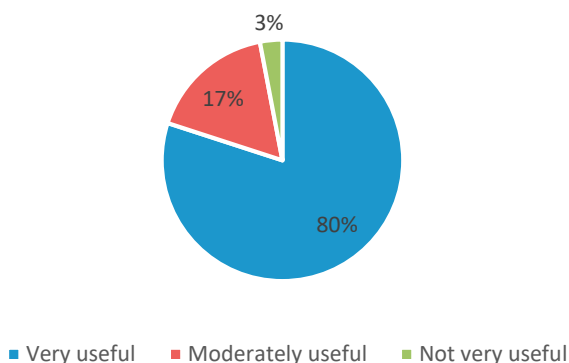


Figure 4 Usefulness of Didactic Quizzes

Source: Own study

The learning quizzes offered to students contain feedback that is made available to students. This means that for each variant of the answer to a question, a rationale is provided as to why the answer is correct or incorrect. This allows users to verify their thinking, their answers to the question, and the quizzes support the learning function. The vast majority of students rate this function as very useful in the educational process (Figure 5).

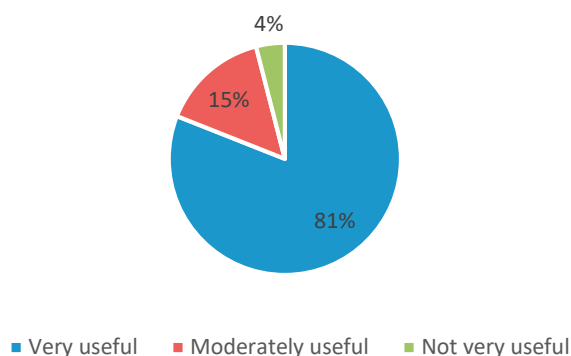


Figure 5 Usefulness of Feedback for IPMA Quizzes

Source: Own study

The IPMA-Student portal also serves an information and communication function. It contains information related to the certification process, competence requirements, recommended course literature, references to other sources of information that may be useful to students and lecturers, and current events related to IPMA-Student team activities, conferences and user workshops. The majority of respondents find this information moderately useful. This is probably due to the fact that students are informed about the process and other areas by the IPMA-Student coordinators at their universities, so they do not see much need to seek this information themselves (Figure 6).

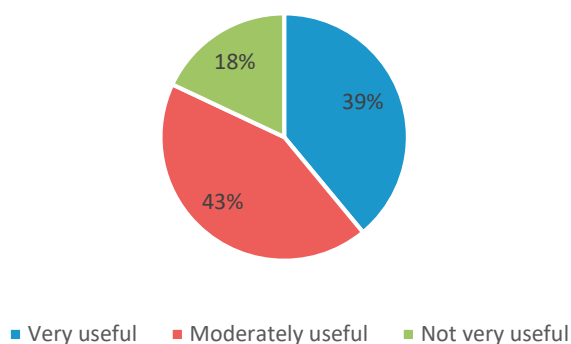


Figure 6 Usefulness of the informative part of the IPMA-Student Portal

Source: Own study

## 10. Conclusion

The presented analysis of the functionality of IPMA-Student Portal indicates that it can be used as a support tool not only to support the development of project management competences, but also to support marketing activities, such as:

- Cross-selling by informing Portal users about other IPMA Poland products dedicated to students, such as IPMA Young Crew membership, Project Master competition, conferences dedicated to students.

- Up-selling by motivating current clients of the IPMA-Student certification to upgrade to IPMA – D level. IPMA offers a discount to IPMA-Student certified students if they take another certification within a year.
- Maintaining clients through email contact in the form of newsletters and dedicated offers of upgrading the certification, participation in a dedicated organisation for students, the IPMA Young Crew.
- Getting to know customers through surveys and research on usefulness of IPMA-Student certification in order to collect consumer information.

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