

Online Training Platform for Library Professionals : ANKOS Academy

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Abstract:

In Turkey, librarianship education is given at academic institutions offering 4 year undergraduate programs. There are no regular professional training program leading to certification for people working in library and information services. Therefore, workers employed in information services in Turkey are complaining about the lack of such professional training programs. Graduate programs leading to advanced academic degrees such as MA and PhD, are not suited for the needs of professionals in their daily activities as those degrees are used for entering the academic life or for supporting the academic background of professionals towards managerial positions.

ANKOS Academy group has started its activities in 2015 in order to offer continuous training programs for information services professionals. The programs aim to enable the professionals to advance their abilities for a better positioning in today's pierce competition

environment at national and international level. ANKOS Academy has the following objectives for professionals:

- *enhancing application oriented skills,*
- *focusing on professional specialization,*
- *transforming competencies into action.*

ANKOS Academy has developed several training programs to suit the needs of today's changing librarianship environment. Those trainings are decided to be offered online via virtual classrooms. After examination of available platforms, GoToMeeting has been selected as the medium of delivery due to its advantages in terms of performance. "Selection and Management of Electronic Resources" and "Open Access and DSpace" are the two trainings developed by the ANKOS Academy group with support of the instructors of the courses. Those trainings are offered between 17 November 2015 and 8 December 2015 for the first time. For a selected group of participants, two parallel sessions are conducted by four instructors. The training is offered to 21 library professionals from 21 different academic libraries free of charge. This initial offering aimed to be an experiment in order to observe weak points for possible improvements. A survey has been applied to the participants after the training to evaluate the effectiveness of the training programs. In this paper, the phases of planning, development, and delivery of ANKOS Academy trainings will be examined in detail. Achievements of the trainings will be evaluated including the survey data. The results indicate that participants have benefited extensively from the trainings where the details will be explained in the paper. Based on the success of the initial trainings, ANKOS Academy has conducted a survey to determine the potential participants of future trainings. Future plans of ANKOS Academy will also be included in the paper.

Keywords: ANKOS Academy, Online training, Lifelong learning; Library Services; Productivity.

Introduction

Library services and applications are developed by expert professionals of the field in order to satisfy needs of researchers. To this mean, the library budget will be spent for the planned services and resources to deliver the most effective services to users in the most efficient way. Library services have to match the needs of its users, and they should also be in harmony with the institution's general operation. In order to reach the goals, the library should have an adequate amount of expert librarians and support staff as the human power.

Currently, there are 8 Library and Information Sciences (Information and Document Management in Turkish language) departments at universities that offer undergraduate education actively. Approximately, 550 students graduate every year (OSYM: Assessment, Selection and Placement Center 2015 Statistics). Professional development opportunities of graduates of Library and Information Sciences departments are dependent on the environment of their workplace. Graduates employed in libraries with an institutional culture have higher chance of obtaining professional development. Libraries with a strong corporate culture try to improve competency of its junior staff by means of mentorship and orientation programs (Celik, 2011). These methods are quite important for the development of staff however, they are limited by the competency of the senior staff of the institution. There exists no general, country-wide method or application for the training of staff working in libraries of Turkey, and this lack causes negative consequences in the delivery of library services and applications. For instance, the expertise about electronic resource selection, acquisition and management requires skills beyond the education offered in the university, and both junior and senior staff do not have the necessary abilities to carry out those operations. Activities (workshops,

seminars, conferences and trainings) conducted by several professional societies such as Turkish Librarianship Association (TKD), University and Research Librarians Association (UNAK), and Anatolian University Libraries Consortium (ANKOS) form an important medium for knowledge sharing among colleagues, however, it cannot be expected that they can deliver the outcomes of planned trainings (Celik, 2011).

In Turkey, there are 29629 libraries (1 national library, 1121 public libraries, 559 university and faculty libraries, 27948 libraries of residential and distance educational institutions) as of the year 2014 (Library statistics, 2015). According to data based on the year 2014, there are 6362 employees in university libraries, 3595 employees in public libraries, and 182 employees in the National Library, yielding a total of 10139 employees (Culture Statistics, 2015). There are no certain data about the number of employees in school, private, and research libraries. However, it can be argued that those employees would be in more need of training in comparison to staff employed in libraries with a stronger institutional organization.

In Turkey, there are 193 higher education institutions: 109 state universities, 76 private (foundation) universities, and 8 private (foundation) vocational schools. It appears to be a necessity to increase the competency of library professionals starting with employees of higher education institutions. Then, this expertise can be extended to employees of libraries of different types. Based on this need, ANKOS association decided to form a working group named ANKOS Academy, on 16.03.2015. ANKOS Academy working group started its activity formed by a coordinator and five members with the aims of “increasing the application based abilities of information services professionals, focusing on professional specialization, and most importantly, transferring competencies into action.” The group has finished its works about the infrastructure, and realized two training programs in two terms, within one year.

In this paper, firstly, the method of distance learning will be mentioned. Then, the infrastructure of the ANKOS Academy and its training activities will be explained. Finally, the outcomes of those training activities will be evaluated and future plans will be highlighted.

Distance Learning

Distance learning is an “educational model where students and teachers at different locations are brought together for education by means of various communication tools” (Karakas, 2000: 101). Education by means of distance learning has started with the “open university” in England. Distance learning has evolved in parallel with the advances in information and communication technologies, and it has reached a widespread use today. Several notations have been used in naming the concepts of distance learning based on the developments in information and communication technologies. They can be represented in Figure 1 below.

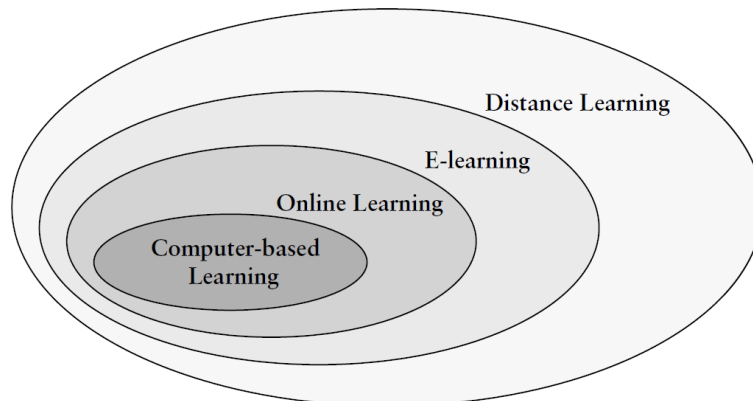


Figure 1. Subsets of Distance Learning (Urdan ve Weggen, 2000 : 9)

The concepts of distance learning displayed in Figure 1 can be summarized as follows:

- **Computer Based Learning:** Learning method, especially based on the use of CD-ROM.
- **Online Learning:** Learning method where information is conveyed by means of Internet and intranets.
- **E-Learning:** Information is conveyed using electronic media (internet, intranet, satellite broadcasting, video, CD-ROM etc.)
- **Distance Learning:** This term is used in the broadest sense, and it includes all distance learning methods.

Turkey has also been affected by the developments about education carried out using distance learning methods in the world. This method is widely used in pre-university and higher education currently. The initial planning about distance learning started in 1927 in Turkey, and the first implementations in Turkish National Education system could be realized in 1960 (Arar, 1999: 26).

The necessity for distance learning can be based on many reasons some of which have been listed below (Urdan and Weggen, 2000: 3-5):

- Need for continuous learning based on the rapid developments in information and communication technologies.
- Deficiency in competencies makes learning mandatory.
- Distance learning is an important method for reducing training costs.
- Institutions operating in diverse geographies and locations search for different methods to train their staff.
- Distance learning is a preferred way of education as it is independent of time and location.
- Increased importance of timely and quick access to information.
- With distance learning, employment during education is not a problem anymore.
- Distance learning increases efficiency of shy students and students with speech problems.
- Considerable reduction in costs.

Libraries and information centers are in the quest of supplying the information needs of researchers, using advances in information sciences in their services, and adapting their service philosophy to the conditions of the time. For instance, the American Library Association Standards Committee declared that library resources and services have to be delivered equally to the academicians and students wherever they may be (Distance Learning..., 2004). Similarly, the president of Middle States Accreditation Association, Howard Simmons, stated in 1990 that “The quality of library services offered to students in the campus and to students following distance learning may not differ” (Lebowitz, 1997). Setup of library services and their delivery using contemporary communications tools is an obligation for equal opportunity in education, for lifelong learning, and for an increase in the quality of education. Undoubtedly, the libraries of the teaching institutions are the units that will fulfill this obligation. Consequently, it is also an obligation for the library professionals to increase their competencies and to reflect the advances in information technologies to the services delivered. Aware of this obligation, ANKOS association assumed this important task by forming ANKOS Academy.

After completing the infrastructure works in a short period, ANKOS Academy Group realized interactive distance learning based trainings in the field of librarianship for the first time in Turkey in 2015. Sustainability of ANKOS Academy trainings is among the primary goals of ANKOS management board and ANKOS Academy Group. In order to achieve sustainability, it is planned to offer trainings with affordable fees and the trainings are targeted to be accompanied by certification. Necessary research and planning have been carried out for that purpose. Well qualified staff forms the essential power of libraries like other institutions. University libraries need to have sufficient staff in both quantity and quality in order to be successful in their operation. Lack of qualified staff causes several deficiencies in practice and it also causes halts and delays in the services. Hence, it is necessary that the trainings have to be sustainable and they have to be applied on a large scale.

ANKOS and ANKOS Academy Working Group

ANKOS

The fundamental aim of ANKOS is to conduct collaborative work for increased support of libraries to education and research. To this end, ANKOS carries out activities to provide access of university and research libraries to the maximum number of e-resources for the most suitable cost by sharing the investments done for those products within an economy of scale perspective. In this way, ANKOS strives to realize access of academicians and students in Turkey to the global information network at the highest level (ANKOS, 2016). For realizing its goals, ANKOS has set up various working groups by bringing expert professionals proficient in their respective fields together. Currently, the following working groups are active in ANKOS:

- License Agreements Group.
- Public Relations Group.
- User Statistics Group.
- Open Access and Institutional Repositories Group.
- Collaboration Working Group.
- Academy Working Group.

Among the groups that provide support for the development of library resources and services in Turkey, ANKOS Academy Group has the task of conducting work on the enhancement of library staff's competencies.

ANKOS Academy Preparation Works

After the decision about the formation of ANKOS Academy Working Group, a coordinator and five members have been assigned, and the group started to work about the infrastructure. Initial meetings of the ANKOS Academy Working Group have been conducted weekly, in a regular manner, using the Skype software. Work plans have been designed and continuously reviewed in those meetings. Members who have taken or assigned a responsibility, have reported the results of their work in subsequent meetings in order to inform other members.

During the preparation works, institutions offering similar trainings worldwide, such as American Library Association (ALA), The Association for Information Management (ASLIB), Australian Library and Information Association (ALIA), have been investigated for the contents of the trainings offered, methods deployed in the trainings, and technical infrastructures used. Furthermore, various institutions in Turkey have also been examined that have a distance learning center or a continuous learning center. As the outcome of those investigations, the requirements for the infrastructure have been determined. According to the analysis carried out, it has been adopted in principle that the trainings will be carried out interactively in virtual classrooms. Based on the features available and the acceptable cost, GoToMeeting platform has been chosen to be used in ANKOS Academy trainings. Further meetings of the ANKOS Academy Group and trial trainings with volunteering participants have been carried out in this platform. The GoToMeeting User's Guide for the participants and instructors has been prepared and published on the web site of ANKOS Academy ([GoToMeeting Guide, 2015](#)).

The group has decided that the trainings to be offered in the first term of ANKOS Academy should be "Selection and Management of Electronic Resources" as electronic resources constitute a major portion of the library budget, and "Open Access and DSpace" as there is a growing interest about those issues both in Turkey and abroad. Regarding the selection of instructors, great attention has been paid that the instructors are experts of their field, having superb communication skills and previous training experience. Based on the scope of the training content, three instructors are assigned for the Selection and Management of Electronic Resources training, and one instructor has been assigned for the Open Access and DSpace training. The instructors have carried out their pre-course work according to the Instructor's Guide prepared by the ANKOS Academy (App.-1).

Within the framework of the infrastructure planning of the ANKOS Academy Group, the members have reviewed the preparations and materials developed by the instructors. Then, trial trainings have been done where ANKOS volunteers have participated. The workflow has been tested in real production environment during those trial trainings with all details such as training announcement and application process, preparation of the training program, selection of participants, and application of the GoToMeeting user guide. Based on the results from the trials, and the feedback obtained from participants, several improvements have been implemented about the sound and video quality and about the faults observed during the applications in a virtual classroom. The proposed suggestions for a more efficient use of the platform have been added to the GoToMeeting User Guide. All activities of ANKOS Academy are shared with the colleagues on the web site <http://akademi.ankos.org.tr/tr/> in a timely manner.

ANKOS Academy Trainings

As of today, ANKOS Academy has realized a total of five trainings in two training terms. In the first term, two main training subjects have been identified that are supposed to contribute to professional development. The first training has been the “Selection and Management of Electronic Resources” which is one of the main areas of interest for ANKOS, and the second training has been about “Open Access and DSpace” which exhibit an increasing popularity both in Turkey and in the world in recent years.

Excluding the trial trainings, those five trainings offered about three subjects in two terms, have been planned to last for 30 hours each. However, they have been delivered as shortened versions of 10 hours for the purpose of introduction (Celik, 2015).

Two different channels have been utilized for the training announcements. One of the channels has been the ANKOS web site, social media pages and the ANKOS academy site, that are visited by the colleagues frequently. The second channel was the three announcement and discussion lists where almost all colleagues are registered as members. The applications have been collected by means of an application form as an e-mail attachment, filled according to the prescribed conditions, for the first term of trainings. In the second term, the applications are done using the web forms on the ANKOS Academy web page. The method of demand collection used in the second term, allowed the participants to perform their applications easily, and it provided important contributions to the process during the evaluations.

In order to create a homogeneous profile of participants in terms of previous education and experience, the criteria for participation in the trainings have been set as given below:

- 1) To be employed in a member institution of ANKOS
- 2) Having minimum 1 and maximum 5 years of experience in the field related to the training.
- 3) Having the necessary technical infrastructure and hardware (to be tested before the training)
 - a. Internet connection
 - b. Earphone
 - c. Microphone
 - d. Silent environment

Moreover, participants are required to attend 80% of the lectures in order to qualify for a certificate of attendance.

There were a total of 45 applications for the two courses offered in the first term. Among them, 5 of the applicants have not been included in the evaluation as they did not satisfy the requirements. For each course, 10 people have been determined among the 40 applicants evaluated. For the second term where three courses are offered, there were 129 applications. Among them, 106 applicants satisfying the application criteria have been evaluated and 15 candidates and 5 substitutes have been determined for each course.

Care has been taken to avoid that a person participates in more than one training in one term. Applications have been favored that come from institutions with a weaker capacity of qualified staff. Results of selections have been announced using the personal communication addresses of applicants, discussion boards, and ANKOS Academy web site. Training program and documents related to the participation to the training have been sent to successful applicants.

At least one ANKOS Academy group member has also participated in the trainings in order to assist the instructors, and in order make necessary preparations for subsequent trainings. All trainings have been conducted in a successful manner where the first term has been carried out between November-December 2015, and the second term in March 2016. A certificate of completion approved by ANKOS has been awarded to participants satisfying the attendance requirement of 80%.

A survey for training satisfaction has been sent to each participant so that the participants can evaluate the trainings. The survey also contained open ended questions. Beyond assessing the satisfaction level of the participants, they have also been asked for the trainings they wish to take in subsequent terms. This data have been used to determine future trainings.

Another survey had been applied among the library professionals in order to determine the training demands, and the results indicated that RDA (Resource Description and Access) has attained the greatest demand. Therefore, necessary preparations have been carried out and RDA course has been included within the portfolio for the second term of trainings. In the second term, the initial two trainings have been repeated with the same instructors whereas two new instructors with superb communication skills and domain expertise have been determined for the RDA training. The trainings were free of charge in the second term too. In the evaluation of the applications for the second term, the participations in the first term have also been considered with the aim that institutions that did not have participated before would be able to benefit from the trainings.

Evaluation of the ANKOS Academy Trainings

Along the aims of ANKOS as described above, free trainings have been offered successfully about three subjects in two terms. In order to evaluate the trainings and in order to collect the expectations and opinions of participants, surveys have been sent to both the participants and instructors at the end of both terms. A total of three surveys have been conducted by ANKOS Academy until today. Two of them were satisfaction surveys targeting the participants, and one of them was the survey to support the planning of the second term.

ANKOS Academy I. Term Participant Satisfaction Survey Evaluation

After the first term of training conducted during November-December 2015, a survey is carried out to collect opinions of participants and to determine their expectations from future trainings. The survey has been sent to 20 participants, and 13 people have responded. 53.85% of the responders have taken the Open Access and DSpace training, and 46.15% of them have taken Electronic Resource Selection and Management training.

According to the responses, “pre-training information delivery” is graded as “very good” by 84.62% of participants, and as “good” by 15.38% of participants. The “training program” is evaluated as “very good” by 92.31% of participants, and as “good” by 7.69% of participants. The “training duration” is evaluated as “very good” by 61,54% of participants, and as “good” by 38.46% of participants. Finally, “training content” is found to be “very good” by 92.31% of participants, and as “good” by 7.69% of participants. The distribution of responses is given in Figure 2 below.

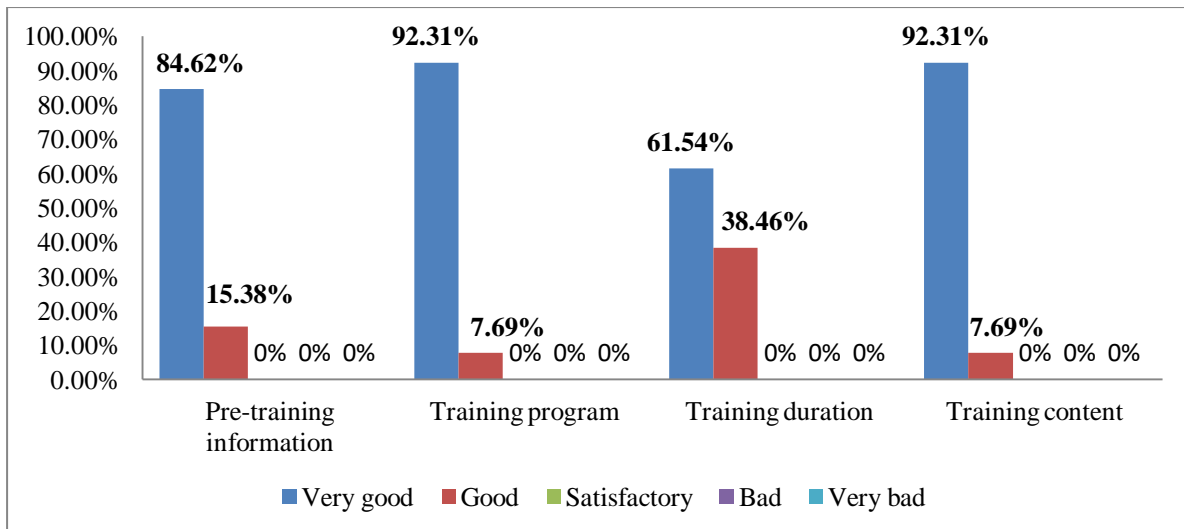


Figure 2 Satisfaction survey results – part I.

As can be seen in Figure 3, 100% of participants agreed that the 1. term training has fulfilled their expectations. Furthermore, 92.31% of participants agreed that they did not confront any problems during the training. Similarly, 92.31% of participants would be willing to participate in subsequent trainings whereas 7.69% did not make any comment about it. Based on the responses of the survey, it can be concluded that the trainings of the first term have succeeded.

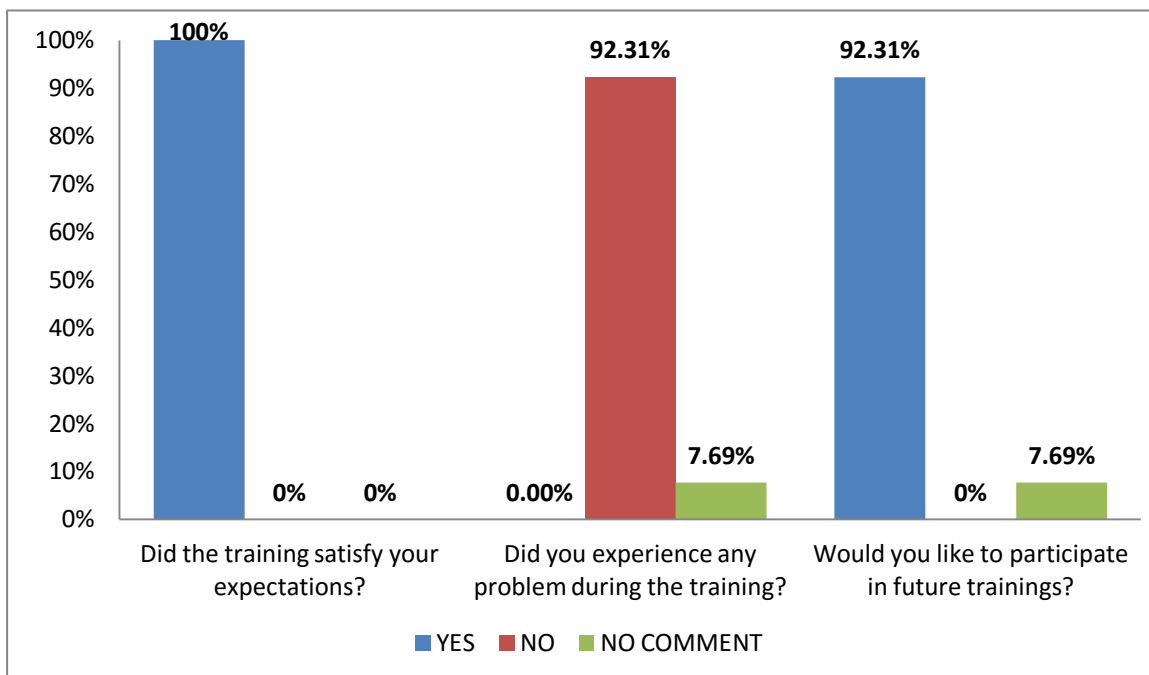


Figure 3. Satisfaction survey results – part II.

ANKOS Academy II. Term Preparation Survey Evaluation

During the preparation phase of the second term training done in March 2016, a survey is conducted to collect the opinions, views, and expectations of potential participants. There were 51 responses and the majority of them were librarians (52.94%). Librarians are followed by managers (21.57%), experts (17.65%), others (3.92%), and officers (1.96%). Among the responders, 1.96% did not reveal their jobs. Job distribution of survey responders is given in Figure 4.

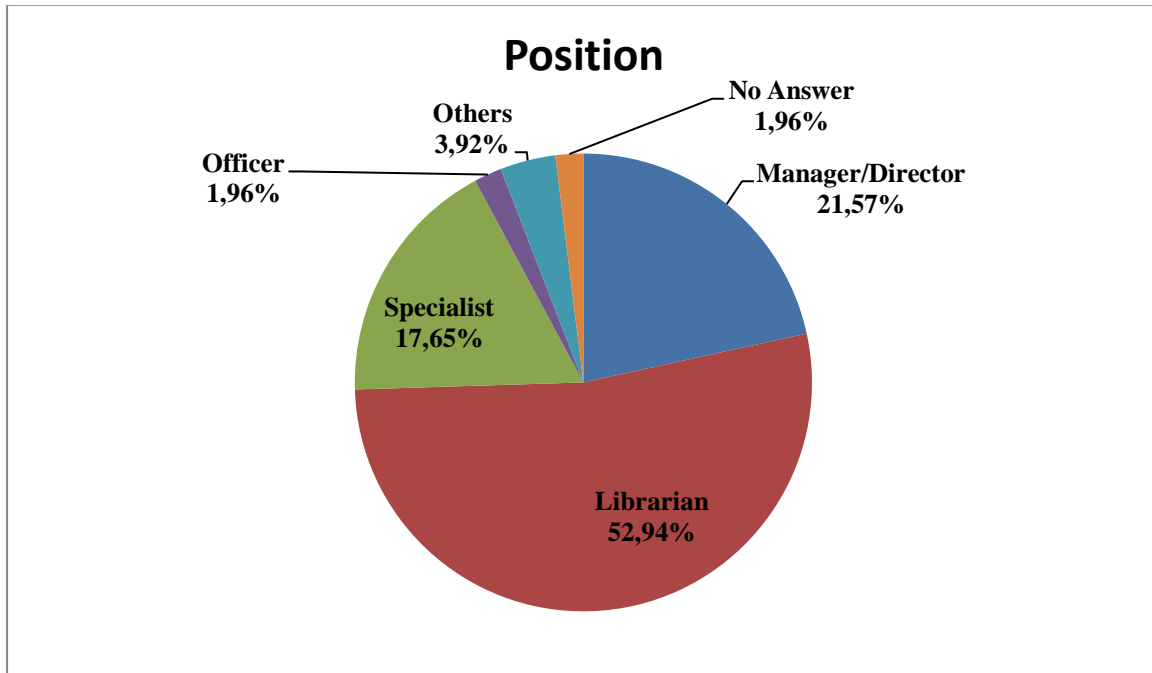


Figure 4 Job distribution

Figure 5 displays the distribution of responses to the question about the training participants wish to take. According to it, similar to the first term, there is a high demand for the courses “Electronic Resource Selection and Management” and “Open Access and DSpace.” However, there is also a high demand for the subject “RDA: Resource Definition and Access.” Therefore RDA has been added to the list of courses to be offered in the second term based on the demand of the survey participants. Moreover, 25.49% of participants declared their wish to take training about “Journal Editorship.” The remaining 9.80% of the responses include cataloging and classification, social media management for libraries, advertising and marketing in library services, cost analysis of electronic resources, information literacy and scientific research methods, Google Academics, and scribd.com. It is evident that the participants have a tendency to take trainings in the fields that are standing out in the world.

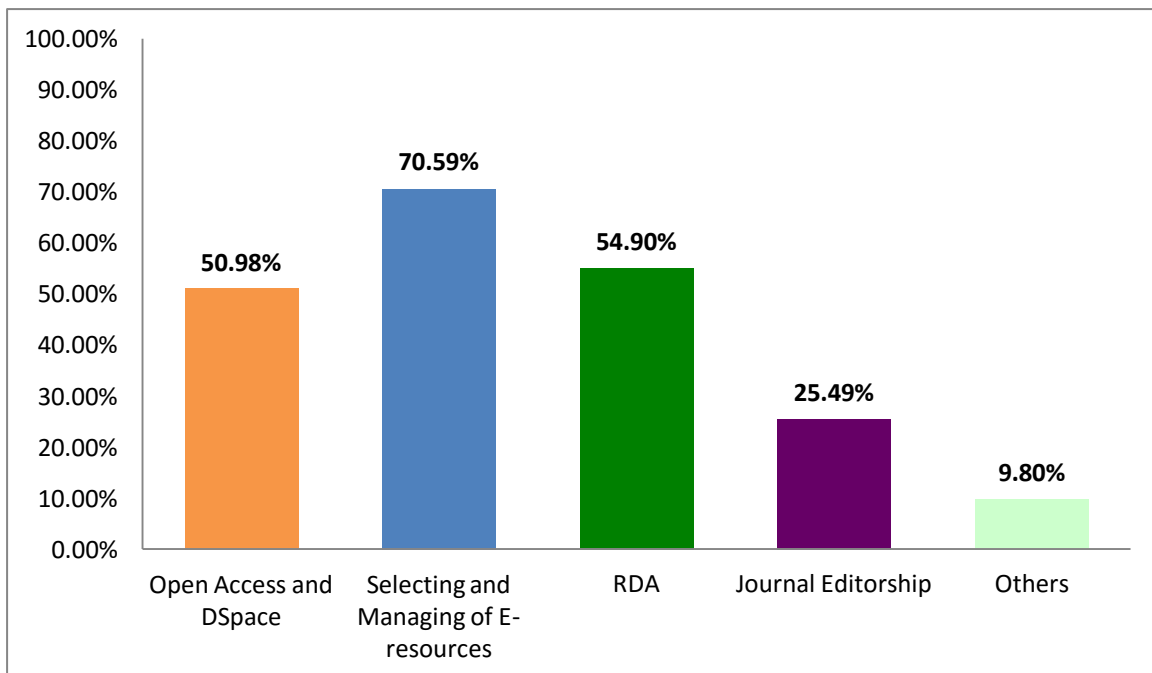


Figure 5. Trainings in demand

Opinions of participants about the timing of the possible future trainings have also been sought after. 64.71% of respondents favored 12:00-14:00 in weekdays, whereas 23.53% have favored 19:00-21:00 in weekdays, and 21.57% preferred 09:00-12:00 at weekends. Furthermore, 58.82% of participants agreed on attending trainings on 2 days per week, whereas 39.22% preferred 3 days per week, and 9.80% preferred other schemes (1 or 5 days per week). Regarding the time they can allocate for the trainings, 41.18% indicate that they can spend 40 min. per day, whereas 27.45% can spend 80 min. per day, and 25.49% can spend 120 min. per day. 5.88% of participants did not reveal any answer for this issue.

ANKOS Academy II. Term Participant Satisfaction Survey Evaluation

After the second term of training conducted during March 2016, another survey is carried out to collect opinions of participants and to determine their expectations from future trainings. The survey has been sent to 45 participants, and 39 people have responded. Each of the three training courses (Open Access and DSpace, Electronic Resource Selection and Management, and RDA) had an equal share of 33.33% of the responders.

According to the responses, “pre-training information delivery” is graded as “very good” by 64.10% of participants, and as “good” by 35.90% of participants. The “training program” is evaluated as “very good” by 69.23% of participants, as “good” by 20.51% of participants, and as “satisfactory” by 7.69%. Moreover, one of the participants did not respond to this question. The “training duration” is evaluated as “very good” by 25.64% of participants, as “good” by 53.85% of participants, as “satisfactory” by 12.82%, and as “bad” by 5.13%. Finally, “training content” is found to be “very good” by 56.41% of participants, as “good” by 33.33% of participants, as “satisfactory” by 5.13%, and as “bad” by 2.56% of participants. One of the participants did not respond to these questions. The distribution of responses is given in Figure 6 below.

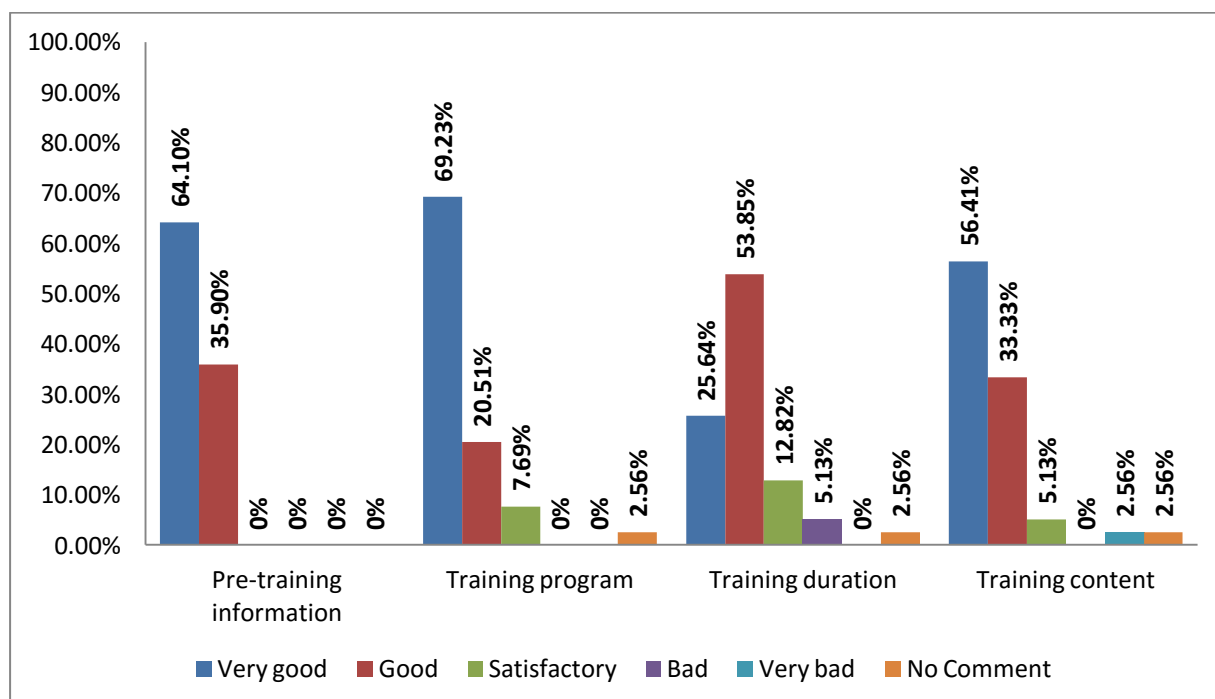


Figure 6. Satisfaction survey results – part I.

In the 2. term of the trainings, 89.74% of participants agreed that the training has fulfilled their expectations. Furthermore, 100% of participants agreed that they did not experience any problems during the training. Similarly, 97.44% of participants (except the one participant who did not make a

decision) would be willing to participate in subsequent trainings. The distribution of responses is given in Figure 7 below.

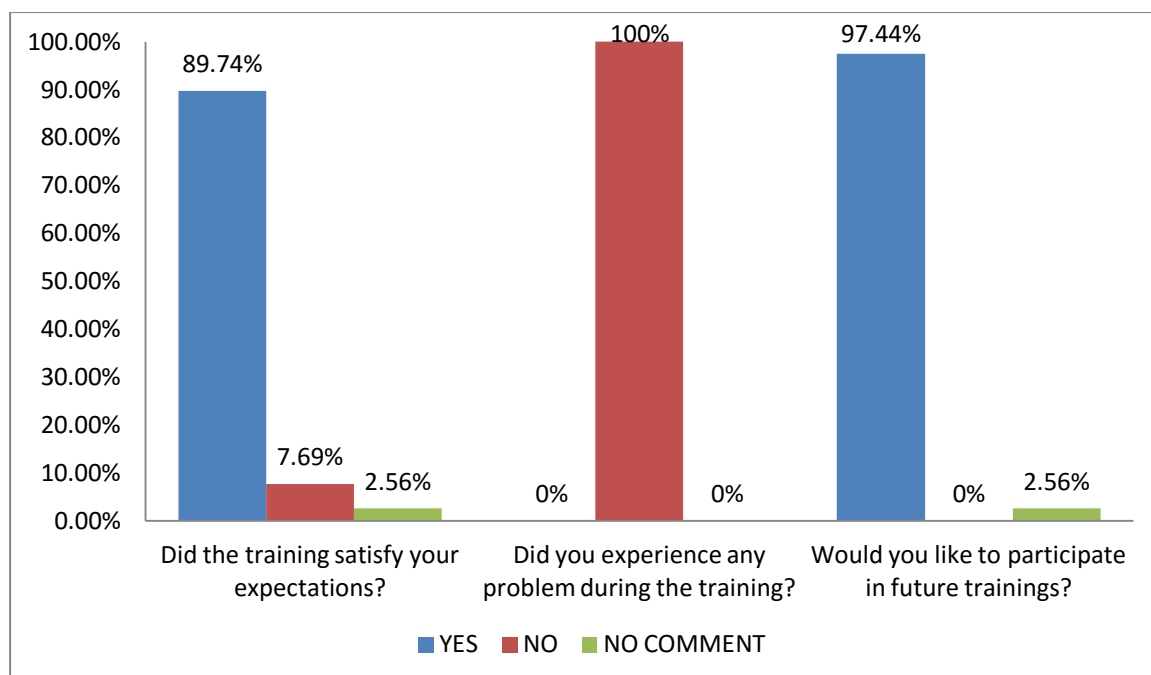


Figure 7. Satisfaction survey results – part II.

ANKOS Academy Training Plans

In the future, ANKOS Academy plans to organize training courses in several other subjects based on needs and demands of the potential participants collected by surveys. It is planned to deliver courses in self-development along with continued courses in professional development area. Even though past trainings were free of charge for promotional purposes, future trainings will have a fee to be paid by the participants. Therefore, it will also be possible for the instructors to have a payment for their teaching efforts. By means of those fees, sustainability of ANKOS Academy works can be achieved and professional trainers can be hired easily. Training courses demanded or decided by ANKOS Academy will have a duration of min. 10h and max. 200h.

Beyond those certificate programs to be offered, daily or hourly trainings are also planned to be delivered as webinars. The trainings to be offered are planned to include international participants both as instructors and as students. Furthermore, possible certificate programs with international scope are also in consideration.

Conclusion

ANKOS Academy trainings are the first and only trainings in the field of librarianship in Turkey that are conducted in an interactive manner using online virtual classrooms. Even though there have been attempts for distance learning before, the trainings of ANKOS Academy attracted a large body of participants in certified trainings for the first time. ANKOS Academy continues its efforts for a sustainable and effective operation in the future.

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References

Arar, A. (1999). *Historical development of distance learning, application models and cost of distance learning*. 1st Distance Learning Symposium 15-16 November 1999 (pp. 25-28), Ankara (in Turkish)

Akbaytürk Çanak, T., Çelik, S., Çetinkaya, İ., Çukadar, S., Güneş, G., Gürdal, G. Kaygusuz, A. (2014). *University Libraries in Turkey Towards 2023: Current state, problems, standards, and proposals for solutions*. Ankara: Higher Education Council (in Turkish)

Çelik, S. (2011). *Mentorship in training of librarians : Dogus University case study*, Information World, 12(2), October, pp. 295-318. (in Turkish)

Çelik S. (2016). *Open Access and DSpace*, <http://akademi.ankos.org.tr/tr/egitimler/acik-erisim-ve-dspace>, (accessed on June, 1st 2016.)

Çukadar, S., Gürdal, G., Çelik, S., Kahvecioğlu, K. (2011). *University Libraries in Turkey: Current situation and the future*. International Higher Education Congress: New approaches and problems (UYK-2011) Proceedings, 27 -29 May 2011, Vol. 3 Section XVI, (pp. 2426 -2439). Istanbul: Higher Education Council

Distance Learning Section Guidelines Committee. (2004, June). *Guidelines for Distance Learning Library Services*. <http://crln.acrl.org/content/65/10/604.full.pdf> (accessed on June, 5th 2016.)

OSYM: Assessment, Selection and Placement Center 2015 Statistics, 2015 Ankara, Higher Education Council (in Turkish)

Karakaş, İ. (2000). *Conference Series on Education in IT Era*, 15-17 May 2000 ODTÜ Proceedings, pp. 101-105, Ankara, Turkey Informatics Association.

Library Statistics, 2014, (2015, 06 Ağustos). Turkish Statistical Institute, News Bulletin. Vol, 21506. <http://www.tuik.gov.tr/PreHaberBultenleri.do?id=21506> (accessed on May, 3rd 2016)

Culture Statistics, (2015). Turkish Statistical Institute. Retrieved from: http://www.tuik.gov.tr/PreIstatistikTablo.do?istab_id=187 (accessed on May, 3rd 2016)

Lebowitz, G. (1997). *Library services to distant students : An equity issue*. Journal of Academic Librarianship, 23(4), 303-309.

Urdan, T. A. & Cornelia, C. W. (2000). e-Learning. WR Hambrecht+Co.