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Full Length Research Paper

Complementing lecturing as teaching pedagogy and students' learning styles in universities in Tanzania: State of issues

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Lecturing remains a popular and predominant teaching pedagogy in Higher Education Institutions and Tanzanian universities are no exception. However, due to increase in enrollments, lecturing encounters serious challenges as burgeoning diverse nature of students' learning needs associated with physiological, psychological, professional and biographic factors. This study employed cross-sectional survey to investigate on undergraduate students' learning styles and extent lecture pedagogy complements students' learning needs in inclusive classes during lecture sessions. The study involved 206 undergraduate students to whom semi-structured questionnaires were administered. The quantitative data were analyzed by SPSS, while qualitative data were subjected to content analysis. The results show majority of undergraduate students were accommodators, preferring more to experiment with their concrete experiences. Furthermore, results show that there is significant difference across their academic year, subject major, working experience and students' exceptionality. The study concludes that lecturing is but a part of teaching pedagogy which has to be flexible to suit the prevailing contexts of inclusive teaching and learning to entail students' differences including academic year, subject major, work experience and exceptionality characteristics of students in lecture halls. The study recommends more studies on lecturing and learning styles to augment theory and practice of inclusive teaching in universities.

Key words: Experiential learning, inclusive class, Kolb's theory, learning style, lecture.

INTRODUCTION

One fundamental characteristic from which knowledge originates is that of being an experience depicted from phronesis or techné (Mbalamula, 2016a; Ulvik and Smith, 2011; Ishumi, 2004; Hunt, 2003). Lecturing is conceptualized from Medieval Latin as "read aloud" where traditionally lecturer as a facilitator of knowledge gives an oral presentation on particular learning experience and learners take notes (Kaur, 2011). To date, lecturing in its different types (Table 1) remains the predominant pedagogical approach used in Higher Education Institutions (HEIs), and universities in Tanzania are no exception (Kaur, 2011; Stephenson et

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Table 1. Major types of lectures (Kaur, 2011).

Types of lecture	Descriptions
Formal oral essay	Lecturer reviews and selects particular information from theories, research, and arguments to support the conclusion written out and read to stimulate emotional and intellectual interests of student.
Expository lecture	Lecturer mostly talks and occasionally responds to interrupted questions from students. These lectures are less elaborate compared to oral essay
Provocative lecture	Lecturer usually provokes and challenges students' understanding of theoretical knowledge, values and provide scaffold to help them merge and forge more complex and integrated perspective.
Lecture discussion	Lecturer opts to encourage students to comment or express concerns rather than simply raise questions. In this case, lecturer becomes a note speaker for few minutes discussing and clarify on key points and thereafter students take full control of the talking.
Lecture-recitation	Lecturer provides students with questions so that they can share what they know or have prepared. Strictly lecturer does not ask questions or point students to talk.
Lecture laboratory	Lecturer talk and students listen and make their own observations, conduct experiment or rather independent work. These are mostly common in science as well as studio art and writing classes.
Lecture discussion	Lecturer focuses on encouraging students to reflect on subject matter presented by enhancing their involvement in the lecture proceedings.

al., 2008). The popularity of lectures inclines to its cost effective value, flexibility, and ease to integrate with other pedagogies (Manolis et al., 2013; Mosha, 2012; Kaur, 2011). The popularity is equally significant since universities play a critical role in generating qualified human capital which has significant impact on national development (Ndyali, 2016; Percy, 2012). Cognizant, Tanzania through various policies including Education Training Policy in 1995 and 2014, and National Higher Education Policy in 1999 has emphasized inter alia on increasing access to higher education which has in turn dramatically increased enrollments in universities (UDOM, 2017; Mohamedbhai, 2014; Ishengoma, 2011; Materu, 2007; URT, 1999, 1995). The data from enrolments in HEIs in Tanzania showed substantial increase by 190.2% from 40993 in 2005/2006 to 118951 in 2009/2010 (URT, 2010). Typically, the largest university in Tanzania, the University of Dodoma (UDOM) observed an increase of 1.558% of undergraduate student enrolled from 1,041 in 2007/2008 to 16,226 in 2011/2012, and by 2015 has reached 18,453 students (UDOM, 2017, 2015, 2012). Despite such quantitative success, the massive enrolments have led to a menacing phenomenon of large classes which not only overwhelms but also challenges universities to serve diverse nature of students' learning needs which are different in terms of how they perceive, process, integrate and express information, expressed in this paper as learning styles (Mosha, 2012; Abidin et al., 2011; Kazu, 2009; Penger and Tekavčič, 2009). The learning styles refer to variety of learners use to comprehend various learning material as stimulated in form of sight, aural and tactile enhancers (Abidin et al., 2011; Lindblom-Ylännea et al., 2006). According to the Kolb's Theory of Experiential Learning, learning occurs in four ways, and hence producing four major groups of learners, namely, the Divergers combine concrete experience with reflective observation to develop concrete situation from various viewpoints; the Assimilators reflect on abstract concepts and putting information in logical form; the Convergers, this group takes abstract ideas and actively experiment to find practical uses for the information; and the Accommodators take concrete experiences mixed with active experimentation in a hands-on experience (Kappe et al., 2009; Wang et al., 2006; Kolb and Kolb, 2005). Studies show there are concerns among researchers and educators on the extent lecturing enhances students' knowledge in respect to learners' individual differences (Manolis et al., 2013; Young et al., 2009). However, moreover, the studies show that the deficits observed in lecturing pedagogies do not relate in lecturing per se but subject to how lectures are being prepared, presented and structured (O-Saki, 2012; Kaur, 2011). For instance, empirical studies in Tanzania and other places show that it remains questionable whether faculty members are able to teach in consistence with students' variant learning styles in large inclusive classes (Mosha, 2012, 2004; O-Saki, 2012; Kaur, 2011; Stephenson et al.,

2008). In same contention, studies show that majority of faculty members teach focusing only on what rather than on how they teach and hardly on how students learn (O-Saki, 2012; Fry et al., 2003). Therefore, the study on lecturing and learning styles is imperative to comprehend teaching and learning in universities (Abidin et al., 2011; Mosha, 2004).

Purpose of the study

There is wide consensus among researchers and educators across the world on decline in quality of services in universities, and in particular of teaching and learning or to those factors relating to teaching such as staffing (UDOM, 2017; Suru, 2015; Mosha, 2012, 2004). Such assertions on the quality of universities have prompted different researchers to embark on research studies, of which same motive prompted this study whose purpose aimed to investigate the perceptions of undergraduate students on the lecturing pedagogy in Tanzanian universities particularly by examining students' learning styles, and the extent to which lecturing accommodates the students' learning styles.

MATERIALS AND METHODS

The cross sectional survey design was adopted using both quantitative and qualitative methodologies to collect and analyze data. The study included 206 respondents from eleven (11) teacher education degree programmes to questionnaires with both closed and open-ended questions were administered to capture numerical data and verbatim responses (Creswell, 2012). Also, fifteen (15) students were selected purposively for interviews including five (5) students with special needs and ten (10) students without special needs. The quantitative data were analyzed by SPSS, and the content analysis for qualitative data. The questionnaires were checked for validity and reliability (Cronbach's alpha=0.82) to ensure its focus and consistency (Ott and Longnecker, 2001). Ethical considerations were observed in terms of respondents' convenience, readiness and confidentiality (Basit, 2010).

Profile of the respondents

The study involved 206 undergraduate students including 156 males (75.7%) and 50 females (24.3%) from eleven (11) degree programs majoring in ten (10) different subjects; about 45.1% (n=93) were in their first year, 23.8% (n=49) in second year, and 31.1% (n=64) were third year students. Also, 36.9% (n=76) were in-service student teachers and majority of them were in their middle years, in this case 73.3% (n=151) were between 20 and 30 years of age, 15.5% (n=32) were between 31 and 40 years, 10.2% (n=21) were between 41 and 50 years and only 1% (n=2); and only 63.1% (n=130) were not yet employed. Similarly, majority (63.6%, n=131) had no professional work experience, while 28.6% (n=59) had between 1 and 10 years of experience, 6.8% (n=14) had between 11 and 20 years of experience, and 1% (n=2) had 21 to 30 years of experience. Moreover, about 8.7% (18) were students with special needs (SwSN) including those with auditory and visual deficit, and 91.3% (n=188) were normal students (NS). In terms of previous education, about 32% (66) had diploma in teaching certificates in basic education levels, and the rest of 68% (140) had advanced certificate of secondary education.

RESULTS AND DISCUSSION

The findings are presented hereunder as per objectives of the study using mean and standard deviations, analysis of variance, and the Tukey post hoc test.

The results from the showed that about 77.7% (n=160) of the undergraduate students preferred to learn by integrating concrete experience with active experimentation (Mean=3.96, SD=1.14). This indicates that undergraduate students would prefer practical experiences which engage them in experimenting what is being taught during lectures. However, results show that other undergraduate students preferred other types of learning styles and with averaged similar mean scores to the most preferred learning style (Table 2). This indicates that there are diverse learning styles characterizing students in inclusive class which also need not to be taken for granted during teaching and learning process.

The results from analysis of the perceptions of undergraduate students on the extent to which lecture accommodated their learning needs are presented in Table 3. The results show, lecturing did comparatively little provide special attention to students with disability (Mean=2.83, SD=1.02). This indicates lecturing as pedagogy did not provide special attention to students with disability, which in other words reveal that lecturers did not put into consideration issue of individual students' differences during lecturing process. For instance, analysis of open-ended responses from both normal students and students with Special Needs (SwSNs) showed that SwSNs encountered significant challenges in lecturing due to lack of care from lecturers, lack of learning materials such as hand-out notes, lack of sign and other language interpreters, and lack of specialized capacity on the side of the lecturers to teach students with special needs. For example, one of the SwSN during an interview narrated; "I think lecturers lack knowledge about Special Need Education and do not care about us, and hence do not recognize that their classes have students with special needs".

The analysis of variance (ANOVA) was used to analyze the second objective by determining variations in line with respondents' variables. The results showed that there was a statistically significant difference between academic year ($F(2.203)=5.855$, $p=0.003$), major subject ($F(9.196)=4.656$, $p=0.000$), work experience ($F(3.202)=3.307$, $p=0.021$), and exceptionality ($F(2.203)=10.074$, $p=0.00)p=0.00$). The output of the ANOVA analysis provided only statistical significant difference between academic year, gender, degree programme, major subject, employment, age, work experience and exceptionality. Therefore, Tukey post hoc test was necessary to compute and establish difference between the groups (Creswell, 2012).

Table 2. Undergraduate students' learning styles (N=206).

Learning styles descriptor	%	Mean	SD
Divergers	66.6	3.73	1.05
Assimilators	46.6	3.66	0.99
Convergers	25.2	3.28	1.17
Accommodators	77.7	3.96	1.14

Table 3. Lecturing on students' learning in inclusive classes (N=206).

Lecturing descriptors	%	Mean	*SD*
Integrated appropriate teaching strategy that engages you in learning	43.1	3.06	1.10
Delivered with adequate knowledge on the type of your ability/disability	53.9	3.34	1.04
Delivered with special attention to students with disability in the class	21.4	2.83	1.02
Integrated appropriate strategies that fit the needs of your learning style	43.7	3.08	1.03
Integrates different teaching materials that engages you in learning	47.1	3.17	1.09

Academic year

The results from the Tukey post hoc test computed showed that there is statistically significance between third year students (24.0 ± 3.9 times, p = 0.003) compared to those in first year (20.9 ± 7.0 times). There was no statistically significant difference between either the students in first year or those in second year students (p = 0.755) nor between students in second year and those in third year (p = 0.070). This indicates that, students in their third year considered lecturing approach as mode accommodating than their first year counter partners, presumably this could be said that third year students being accustomed to lecture pedagogy for about three years. This was in line with the results from analysis of responses in open-ended questionnaires which showed that first year students emphasis on lecturers to teach and explain more deep for them to understand the concepts being taught; while on the other hand, the students in their third insisted more on project work, discussions to be integrated with lectures. Also, these results of analysis indicated significant difficulty in learning existed among both freshers and sophomores relating to extent to which lecturers are able to use various pedagogies to enable student learn more effectively. The results are contented by the responses provided by two students during interviews representing the contrasting perception given earlier;

"*Lecturers are not teaching deep and also lectures are unsystematic so I fail to understand well, and there is no time to ask questions which sometime make difficult to understand certain topic"* (First Year Student).

"*Lecturers need to provide us reflective questions, and are supposed to teach not reading from heir books, because you know some of the lecturers are not preparing for lecture well*" (Third Year Student).

Subject major

The results from analysis of Tukey post hoc test on ten (10) subject majors showed that there is statistically significant difference between student majoring in Kiswahili (19.9 ± 7.5 times, p = 0.034) and those majoring in Geography (18.6 ± 7.0 times, p = 0.001) compared to those majoring in Mathematics (25.8 ± 4.6 times) on efficacy of lecturing in respect to their learning styles. Similarly, statistically significant difference was found between the student majoring in English (24.1 ± 1.6 times, p = 0.011), those majoring in History (23.4 ± 3.6 times, p = 0.001) and those majoring in Biology (23.8 ± 4.8 times, p = 0.018) compared to those majoring in Geography (18.6 ± 7.0 times). Further, the results showed no statistically significant difference between students majoring in Literature, Economics, and Physics. Firstly, the results indicate that students majoring Kiswahili and Geography had different opinions compared to those majoring in Mathematics in terms of the extent lecturers were able to device their lecturing pedagogy to cater for discipline specific needs of their subject majors. The analysis of the responses from open-ended questionnaires revealed students majoring in Mathematics suggesting that lecturing and lecturers should put emphasis on interactive pedagogies, but also should consider other contextual factors such as time at which such courses were being taught, and preferably in the morning rather than in the evening; on the other hand, those majoring in Kiswahili and Geography were concerned with issues such as lecture presentation, more explanation of the concepts being taught, provision of class activities, and opportunity to ask questions. In this case, while mathematics students seemed to be more

practical and experimental, the students majoring in Kiswahili and Geography seem to be more pro-conceptual. Secondly, similar inference can be drawn on the observed difference between students majoring in English and History, and those majoring in Biology indicating that those students majoring in arts subjects would require different pedagogy compared to those majoring science subjects.

Teaching work experience

The results from the Tukey post hoc test showed there was statistically significant difference between students with eleven to twenty teaching experience (26.6 ± 2.6 times, p = 0.040) compared to those with one (1) to ten (10) teaching experience (22.1 ± 4.9 times). Also, there was statistically significant difference between the student with no teaching experience (21.7 ± 6.2 times, p = 0.012) compared to those with eleven (11) to twenty (20) teaching experience (26.6 ± 2.6 times). Moreover, no statistically significant difference between students with more than twenty (21-30) teaching experiences with those with either ten years (p=0.954) or those with twenty years (p=0.412) nor with those without work experience (p=0.976).

Exceptionality

The results from Tukey post hoc test computed between students with special needs (SwSN) and Normal Students (NSs), showed that there was statistically significant difference between students with visual/blindness impairment (SwVIs) (19.4 ± 8.9 times, p = 0.008) and normal students (22.5 ± 5.1 times, p = 0.000) compared to the students hearing impairment (SwHI) (7.0 ± 0.0 times). Otherwise, there was no statistically significant difference between normal students and SwVIs (p=0.075). The difference between normal students to rather students with visual problems students than those students with hearing problems indicates that more or less conditions which influence effective learning required by NSs, SwHIs and SwVIs are similar; but on the contrary, much of the difference was between SwVIs and SwHI. The results from the analysis of the open-ended questions of the questionnaires showed that all of them (NSs, SHIs and SwVIs) pointed out to general aspects for improvement of lecture pedagogy by articulating effective teaching and learning strategies; fair and friendly attitude from lecturers, and lack special knowledge by lecturers on their students' ability/disability. In similar argumentation, the results from the analysis showed that while SwVIs emphasized for more improvement on the provision of reading lens, Braille machines, and elaborate examples during lecture; the SwHIs alternatively reiterated on the need for availability of sign language interpreters during lecture.

DISCUSSION

Learning as product of experience that an individual encounters which hence learning style preferred by an individual or group of students can be unique but also in aggregate similar. Hence, lecturing must adapt to pedagogy that accommodate a range of existent learning styles in terms of its design (Ren, 2013; Kaur, 2011; Kazu, 2009). Therefore, a feasible pedagogy need rather to be flexible than fixed to match up with students' learning styles and ensure significant learning occur (Penger and Tekavčič, 2009; Garcı´a et al., 2007). Also, customized lecture approach is vital to suit the teaching and learning contexts when students with diverse educational characteristics are taught at once (Abidin et al., 2011; Lindblom-Ylännea et al., 2006). Moreover, reforms in HEIs responding to decline of quality of teaching and learning processes incline towards balancing educational settings and instructional designs that will provide comfort and satisfaction for positive learning can occur (UDOM, 2017; Suru, 2015; McCarthy, 2010). Therefore, a balanced lecturing instruction is imperative, to conform the students' learning styles in such a way that not only suits characteristics of few, but adapting to style of each and all students (Franzoni and Assar, 2009; Litzinger et al., 2007).

As adopted in this paper, academic year represents time period that students have interacted with different teaching and university's learning environment including lecturing process; Ceteris paribus, the longer the time students have been exposed to lecturing, the more they are able to acclimatize to lecturing. Typically, the results have shown sophomores being more adapted to lecturing compared to freshers. One explanation for such observation would be freshers having low experience to lecture as a teaching pedagogy and also it being hardly used in their previous education. A study by Lesmes-Anel et al. (2001) revealed that individual learners react very differently to identical learning experiences generated in respect to the year in practice, and hence experience with particular teaching approach. However, their results show both freshers and sophomores encounter similar challenges as they demanded that lecturers need to provide elaborate examples and detailed explanation as what they teach is rather superficial and recitation of other books lacking contextualization and comprehensive description. The contention to possibility of lecturing as teaching pedagogy only enabling for surface learning rather than deep learning leaving students with partial if not amorphous and abstract understanding the concepts taught in class (Offir et al., 2008).

Counting on results of this study, the distinct learning styles existing between students relate to their subject majors. The difference is between different disciplined subjects and even among similar subject majors indicating different learning styles exist between and across disciplines. Such differences may provide validity for different opinions undergraduate students may have

on lecturing as accommodating teaching strategy (Kazu, 2010; Jones et al., 2003). Empirical studies show different teaching styles are often used by lecturers for different subjects within and between science and arts disciplines (Lindblom-Ylännea et al., 2006; Healey and Jenkins, 2000). Similarly, while students majoring in subjects in humanities and social sciences may prefer a lecturing that integrates conceptual learning style tasks, while those majoring in Mathematics and Pure Sciences may opt to a more practical oriented teaching strategy (Gilakjani, 2012a; Heiman, 2006). Such differences related to subject major may emanate from the extent specific teaching style strategies are able to conform not only to sensory activation which is more preferred, but also different coping strategies employed to respond to different academic demands imposed on students (Boström and Hallin, 2013; Gilakjani, 2012b). Therefore, the extent to which lecture accommodates students' learning styles may depend on the subject being taught.

The effect of experience is incremental such that the differences exist between those with lower and higher teaching experience, which implies that those students with higher teaching experience are at more advantage to evaluate lecturing in respect to earned experiences. It is similar to those with at least a year of teaching experience over those without any experience in teaching. With no significance when considering those with the highest teaching experience (>21 years) and those with lower or without teaching experience, indicates there is equally similar effect of lecture method in their learning process. On, other hand, work experience, is of interest, representing a duration undergraduate students have interacted with teaching profession. Evidently, a quite number of students who enroll in various degree programmes in universities are in-service employees in teaching profession which means are exposed to the practice. As such, the previous experience assimilated in teaching potentially creates a professional disposition which may influence how they perceive lecturing as compatible teaching strategy in universities. Studies show that, there are pronounced differences between learners' reactions to different teaching style attributable to the experiential years spent in the practice which affects their motivation and activeness during lecturing approach (Abidin et al., 2011).

While normal students and those with special needs are different in terms of their learning needs and styles, but normal students and those with special needs may not necessarily be different in their learning styles. The finding extends definition of exceptionality to individual ability or disability to interact with particular learning environment as attributed by visual, auditory and tactile abilities. The extent to which each individual is able to learn effectively during lecturing approach is dependent on a number of factors (Katsioloudis and Fantz, 2012). Such factors not only ascribe to cognitive, physical and affective abilities but also appropriate learning equipments and support that facilitative and enhancing individual to interact with learning material. The contention is well argued by Heiman (2006) who revealed student with learning disabilities would graduate a year later than Normal Students peers, though both may be characteristically well adjusted academically. These contentions articulate to assertion that the extent students are to comprehend during lecturing depend on how particular lecture is strategized to address the imminent learning deficit of the individual learner. Studies show that ICT integrated lectures provide reliable support and assistance to address such exceptional needs and accommodate respective students' learning needs (Mbalamula, 2016b).

CONCLUSION AND RECOMMENDATIONS

Every student has unique learning style, but a relatively more eclectic model lecturing could be feasible harmonize aggregate difference between learning styles. Noteworthy, while diversity of students challenges not only universities but also faculty members in lecture halls. This calls for pre-emptive lecturing strategies to optimize every aspect of teaching and learning process to match up students' learning needs prone to influence of duration in learning, subject discipline, work experience, and their exceptionalities.

The study recommends more research studies should be conducted to build comprehensive understanding of students' learning styles and compatible lecturing strategies and styles to enhance teaching and learning process in inclusive classes. Also, teacher in-service professional courses in universities must emphasize on both content and hands-on practical competencies reflecting on special needs education, language specific curriculum in university teaching. Also, improvement of teaching and learning infrastructure, inclusive hardwares and sofwares that empower not only faculty to teach efficiently and but also capacitate students to learn effectively. In addition, emphasis should be directed to students' assessment and evaluation feedbacks to identify students' learning styles to illuminate deficits in lecturing and assessment modes of the university courses. Moreover, governments and technocrats need to consider professional etiquettes not to temper with quantity and quality standards for example double cohort admissions, lowering of entry standards, not only availability of infrastructure being major criteria for admission, but also account availability of personnel and teaching/technical capacity.

CONFLICT OF INTERESTS

The author has not declared any conflicts of interests.

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Determining the variables that affect the reading motivation of educational faculty students

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Reading motivation has a significant contribution to acquire the necessary reading skills, and it has an indisputable effect on continuing to read. When the importance of the role model effect of school teachers in acquiring reading skills is considered, it is expected that reading motivation of the students will be high whose teachers also have a high reading motivation. Considering these issues, this study aimed to determine the variables that affect the reading motivation of students studying at the Faculty of Education. For this purpose, Adult Reading Motivation Scale (ARMS) developed by Schutte and Malouff, and adapted into Turkish by Yıldız et al. was used as the data collection tool. This scale was used for 285 students studying at five different departments in Sinop University, Faculty of Education, in Turkey. For data analysis, relational screening model was used. From the analysis, it was noticed that the variables, gender, profession of father, economic status, frequency of buying newspapers, frequency of buying magazines, frequency of reading in electronic environment, and the reasons for unwillingness to read were efficient upon reading motivations of students whereas the variables such as department, educational level of father, educational level of mother, and profession of mother were not efficient.

Key words: Reading, reading motivation, reading interest.

INTRODUCTION

Humankind has always made efforts to keep up with the age and acquire any kind of cultural accumulation. And this is possible as individuals perceive the information that develops, deepens and changes day by day. One of the various ways of perceiving information is reading.

Reading not only establishes a bridge between the past and present but also enables individuals to have a place for themselves in their social surrounding. Here, the purpose for reading does not mean studying at school or reading course books, but means a way of studying related to adapting to the society and being at peace with the self (Yakıcı et al., 2015).

In recent years, these properties that can be gained through reading, contribute to raising individuals who can understand what they read. In this sense, the countries that want to determine the academic success of their students at a national level have revised their systems by participating in some assessment studies (Berberoğlu and Kalender, 2005). As known, Program for International Student Assessment (PISA) project is remarkable as one of these studies.

The main purpose of PISA project is to put 15-year-old

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students to knowledge and skill tests such as reading skills, mathematic literacy and science literacy once every three years since 2000, and to achieve results from the data obtained in these tests (OECD, 2005).

As an international reference, the main purpose of PISA is to measure to what extent the educational systems of any countries have educated the young in age group of 15. Organisation for Economic Co-operation and Development (OECD) countries and several other countries have recently attended PISA which was first held through the participation of OECD countries in 2000. Totally, 65 countries including 34 OECD countries attended PISA 2012, whose results were explained on 3rd December, 2013 (China did not join PISA as a country; the attendance was from the economies depending on China).

In 2012 measurement, data were collected from 510.000 students representing 28 million young individuals at the age group of 15 living in these countries. One of the main reasons why PISA is an international reference is that science, mathematics and reading skills it measures are the factors that directly determine economic productivity. In PISA, which basically focuses on the necessary skills to take part in economic life, not only the basic skills but also different skills like critical thinking, analysis, synthesis and creativity are measured (Şirin and Vatanartıran, 2014).

This project started with reading skills test in 2000. The first three-year period ended with science literacy test performed in 2006. 2000 was tagged the year of reading skill, 2003 was for mathematics literacy and 2006 for science literacy. Although all three tests were included in each of these years, those areas were prominent for the above mentioned years. The second three-year period started in 2009 through reading skill tests, and these tests continued following the same order and system (Batur and Ulutaş, 2013).

In PISA, 7 competence levels related to reading skill are determined. The students who can accurately answer the items at the 6th level can cope with the concepts not expressed clearly within the text, and can interpret the abstract concepts. Considering several criteria variables, they can make critical assessments beyond the information in the texts; they can make inferences or can hypothesize.

The students who have success at 1b level can find information expressed clearly in a short, simple text supported mostly with illustrations. The students at 1a level can clearly express one or more independent information in a text; can understand the topic of the text and purpose of the author, and can establish relationship between the information in the text and daily information known commonly. Skills and thinking processes measured in reading areas in PISA can be listed as: accessing and remembering information, gathering information together and interpreting, reflecting their ideas and assessing the text.

Turkey lately got acquainted with PISA in 1997 when the first-period pilot test studies started. They could not participate in both pilot and formal test studies due to some reasons that arose from Education Research and Development Directorate's focusing on other projects (Savran, 2004). Turkey joined PISA project in 2003, and has attended all studies carried out since then.

Tests and questionnaire of PISA 2013 project including Turkey were given to 4855 students studying at 12 elementary schools and 147 high schools chosen randomly from seven geographical regions (EARGED, 2005). In this implementation, Finland had the highest success in reading with 543 points, Turkey took the 34th rank with average score of 441 among 40 countries.

PISA 2013 results were used in shaping Curriculum Reform that started in 2004. Elementary and secondary education curriculums developed according to the obtained results were put into practice, and it was explained that assessment of these curriculums would be made with PISA 2006, and these curriculums would be developed according to the results (EARGED, 2005).

In PISA 2016, Korea ranked first, with average score of 556; and Turkey ranked the 37th,with average score of 447 among 56 countries (EARGED, 2010a), and it was at the 39th rank among the countries with 464 average score in PISA 2009 (EARGED, 2010b).

According to PISA 2003 results, two out of third (67.7%) of the students who took the exam (EARGED, 2005) in Turkey scored below the determined proficiency levels. It was observed that this rate decreased to 63.2% in PISA 2006 (EARGED, 2010a), and to 56.7% in PISA 2009(EARGED, 2010b). Moreover, reading skills of 3.8% of the students in PISA 2003 (EARGED, 2005), of 2.10% of the students in PISA 2006 (EARGED, 2010a), and of 1.8% of the students in PISA 2009 were included in the 5th competence level. And it was remarkable that there was no student from Turkey in the 6thcompetence level in 2009 PISA (EARGED, 2010b).

It was significant in 2006 and 2009 that the number of students below basic competence level decreased. Increased average scores were provided, but it was noteworthy that the number of students at competence levels defined with high level reading skills decreased at the same time. In terms of PISA reading skill implementations, the increase Turkey had in average scores was associated with the motivation created throughout the country, with new Turkish curriculum arranged according to Curriculum Reform in 2004. Especially, the 17-point increase provided in PISA 2009 compared to the previous one should not be ignored. However, as indicated by the aforementioned statistical information, it has been a fact that this increase was at basic and medium levels of reading skill, and decrease instead of increase was observed in high-level skill scores (Batur and Ulutaş, 2013).

When the results of PISA 2012 organized by OECD were considered, it was noticed that Turkey had 475

point in reading skills. This indicated that Turkey increased the score (464 point) in 2009, and had an 11-point increase.

However, the recently held PISA 2015 results were not pleasant for Turkey. When the results were analyzed, it was possible to notice that the rank of Turkey decreased. Whereas the reading score of Turkey in 2003 was 441, the score decreased to 428 in 2015 (Özdemir, 2016).

The reference point of this study is that Turkey does not have the desired success in reading skills as seen in PISA results. The primary and most efficient environment for the students to acquire reading skills is school. The pre-service teachers studying at Educational Faculties are required to have knowledge and skills on how they will make their students gain and develop reading skills. Reading motivation has a significant effect on acquiring reading skills. For that reason, reading purposes, reading tendencies and the time students take for reading are closely correlated with motivation.

Motivation positively affects several traits of students depending upon several behaviors such as attitude, and interest towards reading. Interested readers are motivated in reading in various ways, and they gain new understanding from their previous experiences. They can participate in different social interactions through the help of reading. The concept of “reading motivation” has been revealed by reading educationalists that motivation should be domain-specific. Reading motivation is a way used to measure the willingness of individuals to read, makes individuals to have continuous reading behaviors and reveals the deficiencies of individuals in reading (Aydemir and Öztürk, 2013).

It is possible to see several studies on reading motivation in the literature. In his research, Yıldız (2010) investigated the reading motivations of the 3rd, 4th and 5th grade elementary school students. According to the research results, external motivation was more efficient in female students’ tendency towards reading compared to the male students; and as the level of grade increased, internal and external motivation towards reading decreased.

Construct validity of the Reading Motivation Profile scale including 20 items and adapted into Turkish by Yıldız (2010) was tested using confirmatory factor analysis. At the end of the adaptation, a scale form of 18 items indicating the value towards reading in 9 items and indicating the readers’ sense of self factors in 9 items was obtained. This scale was used to investigate to what extent students valued reading and to what extent they considered themselves adequate as a reader.

Data were collected from 2015 individuals in the study carried out by Yıldız et al. (2013) in which they adapted Adult Reading Motivation Scale. The scale included 4 factors and 21 items. As a result of the analyses, the scale was finalized with 19 items. For the validity study of the scale, confirmatory factor analysis was performed. Within the scope of reliability study, test-retest method was used, and Cronbach alpha internal consistency coefficient was calculated. At the end of the study, a valid and reliable scale used for analyzing the reading motivations of adults was obtained.

İleri and Öztürk (2013) developed a reading motivation scale for determining the reading motivations of elementary school students towards texts. Data of the study were collected from 259 fifth grade students. In this study, a 60-item pool was created from several studies (Wigfield and Guthrie, 1995; Chapman and Tummer, 1995; Gambrell et al., 1996) in the literature. The scale items decreased to 30; and after asking the opinions of experts there were 27 items.

In terms of the validity of the scale, the opinion of the expert was asked; and exploratory factor analysis was performed for the construct validity. In terms of the reliability, internal consistency coefficient was calculated. Appropriate values were obtained at the end of the analysis. In conclusion, a valid and reliable scale including 4 factors (perceiving the difficulty of reading, reading competence, effort for reading, and social aspect of reading) and 22 items was obtained.

Durmuş (2014) readapted the reading motivation scale previously adapted into Turkish by Yıldız (2010) in a different group. Data of this research were collected from totally 357 students in 5, 6, 7, and 8th grades. In the study, 29 out of 54 items in the scale were used. Exploratory factor analysis method was used for revealing the construct validity of the scale, and Cronbach alpha internal consistency coefficient was used for the reliability. At the end of the study, appropriate results were obtained, and a valid and reliable scale including 4 factors (importance and attention, competition, social environment, and type and quality of the book) and 29 items was created.

There were 2 factors (love of reading and reason for reading) and 14 items in the reading motivation scale that Katrancı (2015) developed with the participation of 1224 students in the 4th grade of elementary, and the 5 and 6th grades of secondary education. Katrancı used exploratory and confirmatory factor analyses to calculate the construct validity of the scale, and calculated Cronbach alpha internal consistency coefficient for the reliability of the scale. At the end of the study, a valid and reliable scale used for investigating the reading motivations of the students was obtained.

Considering the aforementioned mentioned studies, it can be said that measurement of motivation was the focus of several studies on reading motivation in general, and scales were developed in this sense. This study aimed to determine the reading motivations of the students in the Faculty of Education based on some variables, and in accordance with this purpose, answers to the below mentioned questions are sought for:

(1) What is the reading motivation level of Education Faculty students in general?

(2) Do the reading motivations of the students studying at the Faculty of Education differ according to:

(a) Their gender
(b) Their department
(c) The educational level of their father,
(d) The educational level of their mother
(e) The profession of their father,
(f) The profession of their mother,
(g) Their economic status,
(h) The frequency of buying newspapers,
(i) The frequency of buying magazines
(j) The frequency of reading in an electronic environment
(k) The reasons for reluctance towards reading

Purpose and importance of the research

The role of reading in acquiring cultural accumulation is significant. It has been known that being cultural is a condition for being successful in social life. In this sense, reading enables students to have a better understanding of their own self, their own surrounding and social values. The students should also be made to think that they can have cultural accumulation through reading. And in order to make students gain this consciousness, pre-service teachers should have reading habit, and be conscious of this. Due to these reasons, this study aims to determine the variables affecting the reading motivations of the students studying at the Faculty of Education. Based on the findings obtained in this study, the variables that affected the reading motivations of the students studying at the Faculty of Education were determined, and suggestions related to overcoming the basic factors that prevent reading and developing reading habits were offered.

Problem sentence

Do reading motivations of the students studying at the Faculty of Education differ according to the following factors:

(1) Gender
(2) Department
(3) Educational level of their mother and father
(4) Profession of their father and mother
(5) Economic status
(6) The frequency of buying newspapers and magazines
(7) Internet access, and
(8) Unwillingness to read?

METHODOLOGY

In this section, the research model, study group, data collection and data analysis were emphasized.

Research model

This research was carried out on relational screening model as one of the screening models. The purpose of screening models is to describe a past or current situation as it is (Karasar, 2004). Totally, 304 students studying at Sinop University, Faculty of Education in Sinop Province participated in the study. A form including two section; demographical information and “adult reading motivation scale” was given to the students.

Variables of the research

The variables are grouped into three according to the control variables:

(1) Dependent variable
(2) Independent variable
(3) Control variable

According to Karasar (2004), dependent variable is a kind of result, and can be irritating for the researcher. The dependent variable is chosen by the variable, and is expected to shed light on solution of a problem. The dependent variable of this study is the reading motivation of students. The independent variable is the stimulant variable that has an effect on the dependent variable. The independent variables affect the dependent variable in a way. The independent variables of this research are gender, department, educational level of mother and father, profession of father and mother, economic status, frequency of buying newspapers and magazines, internet access, and unwillingness to read. On the other hand, control variables are surprising variables which are different from the independent variables but also similar to them with regard to the strong possibility of affecting the dependent variable in one way or another. The control variables of this research were different classroom environments, implementation period and different departments.

Population and sample

The target population of the research included Faculty of Education students in Sinop, Turkey and the sample included totally 304 volunteer students studying at 5 different departments in the Faculty. However, the information of 19 students was not included because there was too much missing data for these students, and the study was completed with 285 students. The statistical information related to these students is presented in Table 1.

In Table 1, the percentage of female students in all departments except Social Sciences Teaching Department was more than the percentage of male students. All students in Computer Teaching Department were females. It is possible to mention here that female students preferred Faculties of Education more than the males. Whereas 76% (218) of the 285 students who participated in the study were females; 24% (67) of the students were male students. When the percentage of the departments was considered, majority of the students participated in the study were from Pre-School Teaching Department.

Collection of data

In order to obtain data for the study, “Adult Motivation Scale” was used. The study group included the students studying at the Faculty of Education. This sample was preferred in the research as being easily accessible.

Data collection tools

Adult Reading Motivation Scale was used in order to collect the

Table1. Distribution of the sample group according to departments and gender.

Departments	Number of students		Total department percentage	
	Female	Male		
Science teaching	37 (88)	5 (12)	42 (100)	15
Pre-School teaching	90 (93)	7 (7)	97 (100)	34
Social Sciences teaching	21 (36)	37 (64)	58 (100)	20
Computer teaching	20 (100)	0 (0)	20 (100)	7
Classroom teaching	50 (74)	18 (26)	68 (100)	24
Total	218 (76)	67 (24)	285100 (100)	

data necessary for the statistical analysis of the sub-problems in the research. The detailed information related to the scale is presented below.

Adult reading motivation scale (ARMS)

In this study, Adult Reading Motivation Scale (ARMS) developed by Schutte and Malouff (2007) (Appendix 1), and adapted into Turkish by Yıldız et al. (2013) (Appendix 2) was used as the data collection tool. The theoretical framework of this scale is structured in Reading Commitment Model and Reading Motivation Scale. The original scale included 4 factors and 21 items; however, the scale that was adapted into Turkish included 4 factors and 19 items. The 14 and 17th items in the original scale were excluded from the scale because the factor loads of the items were below 0.30 (Yıldız et al., 2013).

The four factors in the scale were “reading as part of self,” “reading efficacy,” “reading for recognition,” and “reading to do well in other realms.” While naming these dimensions, Self (Reading as Part of Self) expressed the importance of being a reader; Efficacy (Reading Avoidance versus Reading Efficacy) expressed being a competent reader; Recognition (Reading for Recognition) expressed being accepted as a good reader as reading performance’s being known by anyone else; and other (Reading to Do Well in Other Realms) expressed being a reader in order to be successful in other areas. Whereas Cronbach alpha reliability coefficient of the original scale is α=0.85, self- sub-dimension Cronbach alpha reliability coefficient is α=0.87, efficacy is α=0.72, Recognition is α=0.83, and other is e α=0.70 (Schutte and Malouff, 2007). In the scale adapted into Turkish, the Cronbach alpha reliability coefficient of the scale isα=.86, and the reliability coefficient is α=0.82; self, α=0.60 for Efficacy, α=0.78 for Recognition, and α=0.72 for others (Yıldız et al., 2013).

In the scale adapted into Turkish by Yıldız et al. (2013), the state related to the current structure of the scale was determined. For that purpose, a pilot implementation was performed with 190 students by the researchers. In this way, confirmatory factor analysis (CFA) based upon structural equality model was performed, and this structure is presented in Figure 1. In Figure 1, the relationships between ARMS factors and the items in the relevant factor are presented. It was determined that the relationship coefficients calculated between the factors and items varied between 0.46 and 0.83.

According to Büyüköztürk (2002), the values at and over 0.60 could be defined as having high correlation coefficient and the values between 0.30 and 0.59 could be defined as having medium correlation coefficient. When the numerical values were analyzed, it was noticed that the relationship coefficients calculated between the factors and items fit. At the end of the research, it was determined that x^2=388.103, p=.000, df=146, and x^2/df=2.66. As could be seen in Figure 1, the adapted scale included 4 sub-dimensions and fitting with the original scale was provided. Confirmatory factor analysis results are presented in Table 2.

When Table 2 is examined, it can be said that if the value obtained by proportioning chi-square to the degree of freedom(x2/df=2.66) is below 5, then it is an acceptable value. (Marsh and Hocevar, 1988). The value below 3indicates perfect fit, and its being below 5 indicates good fit (Kline, 2005). Thus, the model is said to have a perfect fit.

RMSEA is the square root of average error of squares. In order for the model to be significant, the values on which RMSEA was 0.05 or lower should indicate perfect fit, and the values below 0.10 should indicate good fit (Steiger, 1990; Anderson and Gerbing, 1984; Cole, 1987). The value obtained in the research was 0.094, and this indicated good fit.

CFI was a fit index comparing covariance matrix predicted by the model and covariance matrix of the null-hypothesis model (Hooper, Coughlan and Mullen, 2008). CFI had values varying between 0 and 1. It is possible to mention that a model with CFI value between .95 and 1 had good fit, and a model that had CFI value between 0.90 and 0.95 had acceptable fit (Hu and Bentler, 1999).

In terms of this research, CFI value found to be 0.93, indicating good fit. CFI index is the fit index that is most commonly used in structural equality models (Fan, Thompson and Wang, 1999). NFI is normed fit index, and was developed by Bentler and Bonett as an alternative to CFI. This index searched the fitting of the assumed model with basic or zero hypotheses. NFI value was obtained as 0.96, and this indicated the model to have perfect fit. Moreover, NFI value as normed fit index was determined to be 0.92, and this indicated good fit (Şehribanoğlu, 2005).

GFI indicated general covariance amount between the observed variables calculated by the assumed model. GFI value varied between 0 and 1. GFI values being over 0.90 was accepted as a good model indicator. This meant adequate covariance was calculated between the observed variables (Hooper, Coughlan and Mullen, 2008). AGFI is adjusted goodness of fit index (Schumacker and Lomax, 1996). GFI value being over .85 and AGFI value being over .80 indicated the values to be acceptable (Anderson and Gerbing, 1984; Cole, 1987). In this model, GFI value was obtained to be 0.92, and this indicated the model to have acceptable fit. AGFI value was obtained to be 0.96, and this indicated the model to have perfect fit.

In conclusion, obtained findings proved the model to be acceptable. Internal consistency coefficient indicating the reliability of the scale was α=0.89, and the reliability coefficient was α=0.84 for Self, α=0.75 for efficacy, α=0.75 for recognition, and α=.75 for others. The results of this study are similar with the studies carried out by Schutte and Malouff (2007) and Yıldız et al. (2013) on scale.

From these findings, it can be said that the scale is valid and reliable as a result of the confirmatory factor analysis performed for Adult Reading Motivation Scale. Because *Adult Reading Motivation Scale* was structured on Likert type, each choice was scored as below. The scale had totally 19 items. The 2nd, 3rd, 4th, 5th, 6th,

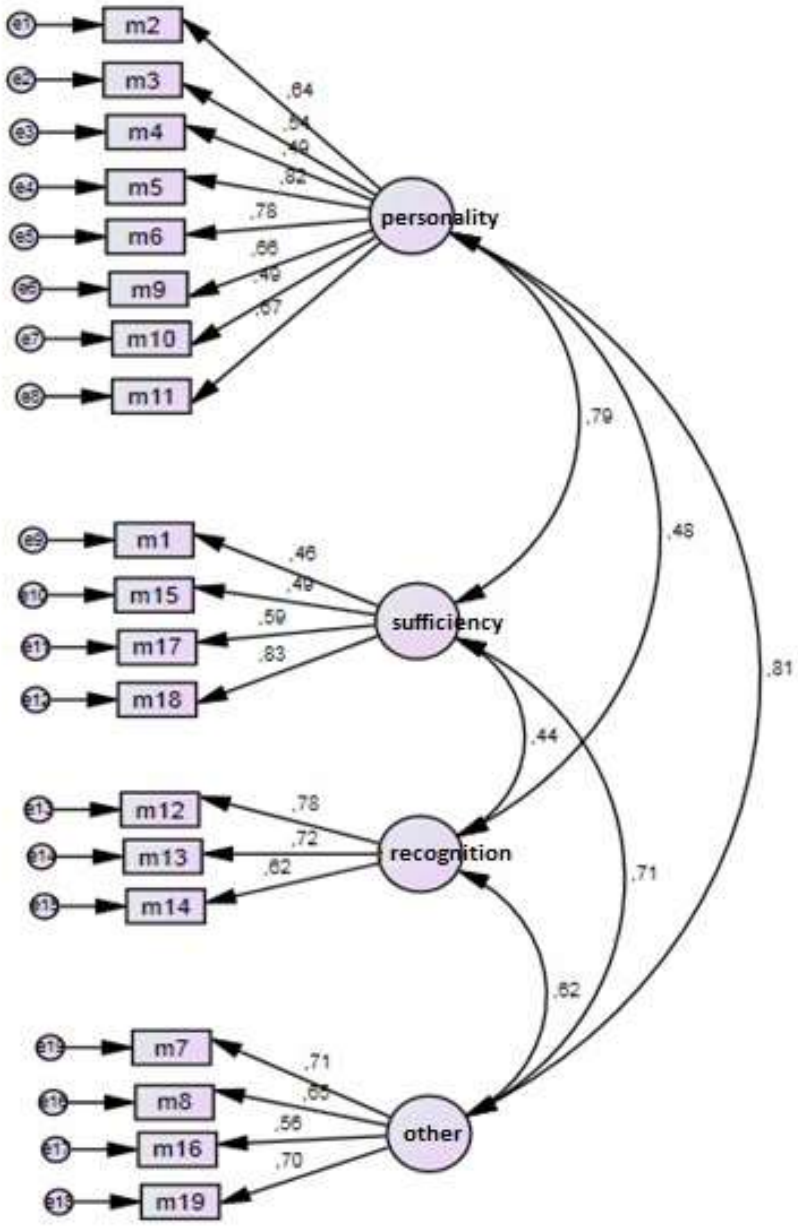

Figure 1. Confirmatory factor analysis for adult reading motivation scale (ARMS).

Table 2. Findings related to adult reading motivation scale confirmatory factor analysis.

Index	Perfect fit criteria	Acceptable fit criteria	Research finding	Result
x^2/df	0-3	3-5	2.66	Perfect fit
RMSEA	0.00 ≤ RMSEA ≤ 0.05	0.05 ≤ RMSEA ≤ 0.10	0.094	Acceptable fit
CFI	0.95 ≤ CFI ≤ 1.00	0.90 ≤ CFI ≤ 0.95	0.93	Acceptable fit
NNFI(TLI)	0.95 ≤ NNFI (TLI) ≤ 1.00	0.90 ≤ NNFI (TLI) ≤ 0.95	0.92	Acceptable fit
NFI	0.95 ≤ NFI ≤ 1.00	0.90 ≤ NFI ≤ 0.95	0.96	Perfect fit
RFI	0.95 ≤ RFI ≤ 1.00	0.90 ≤ RFI ≤ 0.95	0.91	Acceptable fit
GFI	0.95 ≤ GFI ≤ 1.00	0.90 ≤ GFI ≤ 0.95	0.92	Acceptable fit
AGFI	0.90 ≤ AGFI ≤ 1.00	0.85 ≤ AGFI ≤ 0.90	0.96	Perfect fit

9th, 10th, and 11th items (8 items) were related to “reading as the part of self;” 1st, 15th, 17th and 18th items (4 items) were related to “efficacy;” 12th, 13th, and 14th items (3 items) were related to “recognition;” and 7th, 8th, 16th, and 19th items (4 items) were related to “reading to do well in other realms” (other) factor. Numerical values of the choices:

I totally agree: 5 point, I agree: 4 point, neither agree nor disagree: 3 point, I disagree: 2 point, I totally disagree: 1 point.
Because all items of the scale were positive expressions, scoring was the same for all items. According to this, the highest score possible to be taken from the scale was 95, and the lowest score was 19.

Analysis of the data

Quantitative method was used in the research, and obtained data were analyzed using Independent Samples t-Test and One-Way Variance Analysis (ANOVA). The level of significance was accepted to be 0.05 in the statistical analyses used in the research. For analyzing the quantitative data of the research, the statistical techniques were:

(1) Independent samples t-Test
(2) One-Way Variance Analysis (ANOVA) according to type and purpose were obtained. Assumptions of these parametric tests are as follows:

(a) The data should be constant. The data in the study were obtained from Adult Reading Motivation Scale. All the data were constant.
(b) The data should have normal distribution. The analyses performed to determine whether the data are distributed normally or not are presented below. In Table 3 below, skewness-kurtosis coefficients were presented, and inference was made on the normality of the data.

In Table 3, it was noticed that skewness-kurtosis coefficients varied between -1 and +1 interval. These values between -1.5 and +1.5 indicated the value to be acceptable according to Tabachnick and Fidell (2014), and the values between -2.0 and +2.0 indicated the values to be acceptable according to George and Mallery (2010). However, skewness-kurtosis was not adequate for normality alone. For this, Kolmogorov-Smirnov and Shapiro-Wilk tests were performed to reading motivation scale variable. In Table 4, the data are distributed as homogenous. This assumption was presented before the sub-problems were determined during the analyses. Because the data used in the study was appropriate for the required assumptions, the statistical calculations were made.

FINDINGS

In this section, analysis results related to the sub-problems prepared to answer the research problem and interpretations related to these results were included.

Problem

Do reading motivations of the university students differ according to the following factors: gender, department, educational level of mother and father, profession of father and mother, economic status, the frequency of buying newspapers and magazines, internet access, and unwillingness to read? The sub-problems below were answered in order to look for an answer to this problem.

Table 3. Skewness-Kurtosis coefficients of the variable.

Variable	Kurtosis	Skewness
Reading motivation scale	0.249	-0.516

First sub-problem

What is the level for the reading motivations of the university students?

Arithmetic average and standard deviation values related to the first sub-problem are presented in Table 5. When reading motivation level of the students was considered in terms of sub-dimensions of the scale, the average level was 27.48 in dimension of “self.” There were 8 items in this dimension of the scale. The highest score possible to be taken from this dimension was 40, and the lowest score was totally 8 including all the positive. As the highest possible score to be taken from “self” dimension and the average was 27.48, it was determined that students’ belief of the importance of being a reader was at a good level. In “efficacy” sub-dimension, the average was 12.58.

In this dimension of the scale, there were all positive 4 items. The highest score possible to be taken in this dimension was 20, and the lowest score was 4. As the highest possible score to be taken from “efficacy” dimension was 20 and the average was 12.58, it was determined that students’ belief of the importance of being an efficient reader was at a good level.

In “recognition” sub-dimension, the average was 9.48. There were all positive 3 items in this dimension of the scale. The highest possible score to be taken from this dimension was 15, and the lowest score was 3. As the highest possible score to be taken from “recognition” dimension was 15 and the average was 9.48, it was determined that students’ belief of being accepted as a good reader by anyone was at a relatively high level. In “other” sub-dimension, the average was 13.56. There were all positive 4 items in this dimension of the scale. The highest possible score to be taken from this dimension was 20, and the lowest score was 4.

In this sense, students’ belief of being successful in other realms was found to be relatively high. When the sub-dimensions in adult reading motivation scale were considered, “self” dimension scores expressing students’ belief of the importance of being a reader were higher than the other dimensions.

Second sub-problem

Do reading motivations of university students differ

Table 4. Normality test.

Variable	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistics	SD	p	Statistics	SD	p
Reading motivation scale	0.185	285	0.059	0.895	285	0.125

c. Variance homogeneity should be provided for Independent Samples t-Test and One-Way Variance Analysis (ANOVA) (Tabachnick and Fidell, 2014).

Table 5. Sub-dimension statistics of adult reading motivation scale**.**

Dimensions / ARMS	N	X	Standard deviation	Maximum score possible to be taken
Dimension of self	285	27.48	5.70	40
Dimension of efficacy	285	12.58	2.98	20
Dimension of recognition	285	9.48	3.51	15
Dimension of other	285	13.56	3.77	20
ARMS	285	62.96	10.93	95

Table 6. Descriptive statistics of adult reading motivation scale scores according to gender.

Groups		N	Average	Standard deviation
ARMS	Female	218	63.94	0.71
	Male	67	59.78	1.42

according to their gender? In Table 6, adult reading motivation scores according to gender were presented.

In Table 6, whereas ARMS score average of female students was 63.94, and the standard deviation was 71, ARMS score averages of male students was 59.78, and the standard deviation was 1,42. Scores of both groups were different from each other. Independent Samples t-Test results in Table 7 were regarded for determining whether there was a statistically significant difference between the scores of the groups.

According to Levene's test results, because our assumption related to the homogeneity of variance was confirmed (sig=0.329; sig>0.05), the independent samples t-Test was done. The final premise of the Independent Samples t-Test was performed. Subsequently, ARMS scores of the male and female students were assessed according to independent-samples t-Test results. The difference obtained here was found to be statistically significant (p=0.006; p<0.05).

This difference was in favor of the experiment group ($K_{63.94}>E_{59.78}$). It is possible to conclude that reading motivations of female students were higher than the motivations of male students.

Third sub-problem

Do reading motivations of university students differ according to their department?

Whether the difference between ARMS score averages was significant in terms of departments was analyzed with F-test, and the analysis results are presented in Table 8. In Table 8, the difference found as a result of one-way variance analysis (ANOVA) to determine whether ARMS scores differed significantly according to the variable of department was not significant (F=1.039; p=0.388; sig>0.05). It was concluded that reading motivations of the pre-service teachers were independent from the department they studied at.

Fourth sub-problem

Do reading motivations of university students differ according to educational level of father?

In Table 9, ARMS scores and statistics according to the educational level of father are presented. In Table 9, the difference found as a result of one-way variance analysis (ANOVA) performed to determine whether ARMS scores differed significantly according to the variable of educational level of father was not statistically significant (F=0588; p=0.671; sig>0.05). It could be concluded that the educational status of father did not have an effect upon reading motivation.

Table 7. Independent samples t-Test table for adult reading motivation scale scores according to gender.

Variable		Variance equality Levene test		Independent groups t-test			
		F	Sig.	t	SD	p	Average difference
ARMS	Variances are equal	0.957	0.329	2.759	283	0.006	4.16425
	Variances are not equal	-	-	2.622	101.749	0.010	4.16425

Table 8. One-way variance analysis (ANOVA) results related to arms scores according to departments.

Departments	N	Avg.	SD	Source of variance	KT	SD	KO	F	P
Science teaching	42	63.76	9.255	Between groups	496.045	4	124.011	1.039	0.388
Pre-school teaching	68	65.00	8.954	In group	33434.531	280	119.409		
Social sciences teaching	58	62.12	13.470	Total	33930.575	284	-		
Computer teaching	97	61.74	11.259	-	-	-	-		
Classroom teaching	20	62.70	10.362	-	-	-	-		
Total	285	62.96	10.930	-	-	-	-		

Table 9. One-way variance analysis (ANOVA) results related to ARMS scores according to the educational status of father.

Type of graduated school	N	Avg.	SD	Source of variance	KT	SD	KO	F	P
Elementary school	106	62.26	11.69	Between groups	282.863	4	70.716	0.588	0.671
Secondary school	42	62.57	11.76	In group	33647.713	280	120.170		
High school	69	62.74	10.90	Total	33930.575	284	-		
University	64	64.75	9.37	-	-	-	-		
Master degree	4	61.00	0.00	-	-	-	-		
Total	285	62.96	10.930	-	-	-	-		

Fifth sub-problem

Do reading motivations of university students differ according to educational level of mother?

In Table 10, ARMS scores and statistics according to the educational level of mother are presented. In Table 10, the difference found as a result of one-way variance analysis (ANOVA) performed to determine whether ARMS scores differed significantly according to the variable of educational level of mother was not statistically significant (F=0.937; p=0.458; sig>0.05).It could be concluded that educational status of mother did not have an effect upon reading motivation.

Sixth sub-problem

Do reading motivations of university students differ according to profession of father?

In Table 11, ARMS scores and statistics according to the profession of father are presented. In Table 10, the difference found as a result of one-way variance analysis (ANOVA) performed to determine whether ARMS scores differed significantly according to the variable of profession of father was statistically significant (F=3.643; p=0.003; sig<0.05). Subsequent to this process, subsidiary post-hoc analysis techniques were performed to determine from which sources the difference arose from.

After ANOVA, the hypothesis related to whether group distribution variances were homogenous or not was tested with Levene's test in order to decide which post-hoc multiple comparison technique should be used, and the variances were specified to be homogenous (LF=0.312; sig>0.05). After this, Scheffe multiple comparison technique was used which is highly preferred for cases when the variances are homogenous. The reason for preferring Scheffe test was the test's being sensitive towards alpha type error.

After the one-way variance analysis (ANOVA) performed for determining among which groups ARMS scores differed in terms of the profession of father, a

Table 10. One-Way variance analysis (ANOVA) results related to ARMS scores according to the educational level of mother.

Type of graduated school	N	Avg.	SD	Source of variance	KT	SD	KO	F	P
Not graduated from a school	27	63.52	13.09	**-**	-	-	-		
Elementary school	131	62.50	10.99	Between groups	793.598	5	158.720		
Secondary school	53	61.13	12.58	In group	33136.977	279	118.771		
High school	46	63.85	6.62	**Total**	33930.575	284	-	1.336	0.249
University	23	65.39	9.28	-	-	-	-		
Master degree	5	72.00	14.94	-	-	-	-		
Total	285	62.96	10.93	-	-	-	-		

Table 11. Adult reading motivation scale descriptive statistics according to profession of father.

Profession	N	Avg.	SD	Source of variance	KT	SD	KO	F	P
Worker	6	63.29	13.29	**-**	-	-	-	-	-
Farmer	21	56.24	9.90	Between groups	2079.638	5	415.928		
Officer	59	62.39	9.79	In group	31850.937	279	114;161		
Artisan	33	67.30	8.27	**Total**	33930.575	284	-	3.643	0.003
Self-Employed	19	58;47	15.17	-	-	-	-		
Other	97	63.98	9,29	-	-	-	-		
Total	285	62.96	10.93	-	-	-	-		

Table 12. Adult reading motivation scale descriptive statistics according to profession of mother.

Profession	N	Avg.	SD	Source of variance	KT	SD	KO	F	P
Housewife	228	62.88	11.18	**-**	-	-	-	-	-
Worker	12	64.58	9.11	Between groups	560.189	5	112.038		
Officer	16	65.25	9.73	In group	33370.86	279	119.607		
Artisan	2	67.00	0.00	Total	33930.575	284	-	0.937	0.458
Self-employed	9	66.22	11.59	-	-	-	-		
Other	18	58.78	9.65	-	-	-	-		
Total	285	62.96	10.93	-	-	-	-		

statistically significant difference ($p<0.05$) in favor of self-employed fathers was found between the students with farmer fathers and self-employed fathers. Socio-economic status has affected access to today's reading instruments, and also financial possibilities were also efficient upon accessing these instruments. The differences between other sub-dimensions were not statistically significant ($p>0.05$).

Seventh sub-problem

Do reading motivations of university students differ according to profession of mother?

In Table 12, ARMS scores and statistics according to the profession of mother are presented. In Table 12, the difference found as a result of one-way variance analysis (ANOVA) performed to determine whether ARMS scores differed significantly according to the variable of profession of mother was not statistically significant ($F=0.937$; $p=0.458$; $sig>0.05$). It was concluded that reading motivations of pre-service teachers were independent of the profession of their mothers.

Eighth sub-problem

Do reading motivations of university students differ according to their economic status?

In Table 13, ARMS scores and statistics according to the monthly income are presented. In Table 13, the difference found as result of one-way variance analysis

Table 13. Adult reading motivation scale descriptive statistics according to monthly income.

Monthly income	N	Avg.	SD	Source of variance	KT	SD	KO	F	P
Below 500TL	7	50.85	7.54	-	-	-	-	-	-
Between 501-1000TL	35	64.60	13.39	Between groups	2831.990	10	283.199	2.495	0.007
Between 1001-1500TL	80	64.02	12.00	In group	31098.858	274	113.498	-	-
Between 1501-2000TL	37	61.56	9.94	Total	33930.575	284	-	-	-
Between 2001-2500TL	43	60.41	9.63	-	-	-	-	-	-
Between 2501-3000TL	32	60.12	10.34	-	-	-	-	-	-
Between 3001-3500TL	20	67.25	0.89	-	-	-	-		
Between 3501-4000TL	11	65.27	9.60	-	-	-	-		
Between 4001-4500TL	8	70.50	3.16	-	-	-	-	-	-
Between 4501-5000TL	10	63,60	8.13	-	-	-	-		
Above 5001TL	2	71.00							
Total	285	62.96	10.93.00	-	-	-	-		

(ANOVA) performed to determine whether ARMS scores differed significantly according to the variable of monthly income was statistically significant(F= 2.495; p=0.007; sig<0.05).Subsequent to this process, subsidiary post-hoc analysis techniques were performed to determine which groups the difference arose from.

After ANOVA, the hypothesis related to whether group distribution variances were homogenous or not was tested with Levene's test in order to decide which post-hoc multiple comparison technique should be used, and the variances were specified to be homogenous (LF=0.380; sig>0.05). After this, Scheffe multiple comparison technique was used which is highly preferred for cases when the variances are homogenous. The reason for preferring Scheffe test was the test's being sensitive to alpha type error. After one-way variance analysis (ANOVA) performed for determining among which sub-groups ARMS scores differed in terms of the variable of monthly income, a statistically significant difference (p<0.05) was found between the one with less than 500TL monthly income and the other groups in favor of the latter as result of post-hoc Scheffe test.

A statistically significant difference (p<0.05) was also determined between the students with monthly income of 15001 to 200TL and the ones with 4001 to 4500TL; and between the ones with a monthly income of 2001 to 2500TL and the ones with 3001-3500TL; and between the ones with a monthly income of 3001 to 3500TL and the ones with 4001 to 4500TL; and between the ones with a monthly income between 2501-3000TL and the ones with 4001 to 4500TL. It could be concluded that specific economic level increased reading motivation. The statistical difference between these groups of students was in favour of the ones with higher income.

However, it was noticed that the economic increase after 4001 to 4500TL economic range did not have an effect upon this motivation. The difference between other sub-dimensions as result of the analyses performed in reference to this was not found statistically significant (p>0.05).

Ninth sub-problem

Do reading motivations of university students differ according to the frequency of buying newspapers?

In Table 14, ARMS scores and statistics according to the frequency of buying newspapers are presented. In Table 14, the difference found as result of one-way variance analysis (ANOVA) performed to determine whether ARMS scores differed significantly according to the variable of frequency of buying newspapers was statistically significant (F= 1.692; p=0.021; sig<0.05). Subsequent to this process, subsidiary post-hoc analysis techniques were performed to determine which groups the difference arose from.

After ANOVA, the hypothesis related to whether group distribution variances were homogenous or not was tested with Levene's test in order to decide which post-hoc multiple comparison technique should be used, and the variances were specified to be homogenous (LF=0.498; sig>0.05).

After this, Scheffe multiple comparison technique was used which is highly preferred for cases when the variances are homogenous. The reason for preferring Scheffe test was the test's being sensitive to alpha type error. As result of one-way variance analysis (ANOVA) performed to determine among which groups ARMS scores differed according to the variable of frequency of buying newspapers, a statistically significant difference (p<.05) was determined in favor of subscribers between the students who have never bought newspapers and subscribers at the end of post-hoc Scheffe test.

As a result, it was noticed that reading motivations of the students who read newspapers regularly every day are higher than the ones who have never bought newspapers. The difference between the other sub-

Table 14. One-Way Variance Analysis (ANOVA) Results Related to ARMS Scores According to the Frequency of Buying Newspapers.

Frequency of buying newspapers	N	Avg.	SD	Source of variance	KT	SD	KO	F	P
I never buy	47	61.38	14.42	**-**	-	-	-	-	-
I sometimes buy	165	62.39	10.05	Between groups	602.079	3	200.693		
I often buy	47	65.85	10.16	In group	33328.496	281	118.607	1.692	0.021
Subscriber	26	64.19	9.86	**Total**	33930.575	284	-		
Total	285	62.96	10.93	-	-	-	-		

Table 15. One-way variance analysis (ANOVA) results related to ARMS scores according to the frequency of buying magazines.

Frequency of buying magazines	N	Avg.	SD	Source of variance	KT	SD	KO	F	P
I never buy	155	61.74	1442	**-**	-	-	-	-	-
I sometimes buy	91	63.31	10.05	Between groups	886.420	3	295.473		
I often buy	27	67.44	10.16	In group	33044.155	281	117.595	2.513	0.039
Subscriber	12	65.92	9.86	**Total**	33930.550	284	-		
Total	285	62.96	10.93	0	-	-	-		

dimensions was not found to be statistically significant (p>0.05).

Tenth sub-problem

Do reading motivations of university students differ according to the frequency of buying magazines?

In Table 15, ARMS scores and statistics according to the frequency of buying magazines were presented. In Table 15, the difference found as a result of one-way variance analysis (ANOVA) performed to determine whether ARMS scores differed significantly according to the variable of frequency of buying magazines was statistically significant (F= 2.513; p=0.039; sig<0.05). Subsequent to this process, subsidiary post-hoc analysis techniques were performed to determine which groups the difference arose from.

After ANOVA, the hypothesis related to whether group distribution variances were homogenous or not was tested with Levene's test in order to decide which post-hoc multiple comparison technique should be used, and the variances were specified to be homogenous (LF=0.223; sig>0.05). After this, Scheffe multiple comparison technique was used which is highly preferred for cases when the variances are homogenous. The reason for preferring Scheffe test was the test's being sensitive to alpha type error. As a result of one-way variance analysis (ANOVA) performed to determine among which groups ARMS scores differed according to the variable of frequency of buying magazines, a statistically significant difference (p<0.05) was determined in favor of the students who often bought magazines between the students who have often bought magazines and who have never bought magazines at the end of post-hoc Scheffe test.

In general, reading motivations of the students who read magazines were higher than the ones who have never read. The difference between the other sub-dimensions was not found to be statistically significant (p>0.05).

Eleventh sub-problem

Do reading motivations of university students differ according to frequency of reading in an electronic environment?

As could be seen in Table 16, ARMS scores and statistics according to the frequency of reading in an electronic environment were presented. In Table 16, the difference found as a result of one-way variance analysis (ANOVA) performed to determine whether ARMS scores differed significantly according to the variable of frequency of reading on an electronic environment was statistically significant (F= 2.565; p= 0.045; sig<0.05). Subsequent to this process, subsidiary post-hoc analysis techniques were performed to determine which groups the difference arose from.

After ANOVA, the hypothesis related to whether group distribution variances were homogenous or not was tested with Levene's test in order to decide which post-hoc multiple comparison technique should be used, and the variances were specified to be homogenous LF=0.105; sig>0.05).

After this, Scheffe multiple comparison technique was

Table 16. One-way variance analysis (ANOVA) results related to arms scores according to the frequency of reading on an electronic environment.

Frequency for reading in an electronic environment	N	Avg.	SD	Source of variance	KT	SD	KO	F	P
Every day	173	63.97	10,05	-	-	-	-	-	-
Once a week	41	63.76	8.52	Between groups	904,234	3	301.411		
Once a month	36	61.19	11.62	In group	33026.341	281	117.531	2.565	0.045
I never read	35	58.86	15.32	Total	33930.575	284	-		
Total	285	62.96	10.93	-	-	-	-		

Table 17. One-way variance analysis (ANOVA) results related to ARMS scores according to the reasons for unwillingness to reading.

Reasons for unwilling to reading	N	Avg.	SD	Source of variance	KT	SD	KO	F	P
I have limited time	46	67.48	-	-	-	-	-	-	-
I am lazy	76	60.42	-	Between groups	2200.172	5	440.034	-	-
I don't like reading	34	62.27	10.05	In group	31730.403	279	113.729	3.869	0.002
Once a week	24	61.46	8.52	Total	33930.575	284	-		
I have no such habit	69	61.55	11.62	-	-	-	-	-	-
Other	36	56.92	15.32	-	-	-	-		
Total	285	62.96	10.93	-	-	-	-		

used which is highly preferred for cases when the variances are homogenous. The reason for preferring Scheffe test was the test's being sensitive towards alpha type error. As a result of one-way variance analysis (ANOVA) performed to determine among which groups ARMS scores differed according to the variable of the frequency of reading on an electronic environment, a statistically significant difference ($p<0.05$) was determined in favor of the students who have read on an electronic environment every day between the students who have never read on an electronic environment and who have read every day at the end of post-hoc Scheffe test.

Especially intense use of informative communication technologies in today's world was noticed to increase reading motivations of the students who have used this technology for reading. No statistically significant difference was found between other sub-dimensions ($p>0.05$).

Twelfth sub-problem

Do reading motivations of university students differ according to the reasons for their unwillingness to reading?

In Table 17, ARMS scores and statistics according to the reasons for their unwillingness to reading were presented. In Table 17, the difference found as a result of one-way variance analysis (ANOVA) performed to determine whether ARMS scores differed significantly according to the variable of the reasons for unwillingness to read was statistically significant ($F= 3.869$; $p=0.002$; $sig<0.05$). Subsequent to this process, subsidiary post-hoc analysis techniques were performed to determine which groups the difference arose from.

After ANOVA, the hypothesis related to whether group distribution variances were homogenous or not was tested with Levene's test in order to decide which post-hoc multiple comparison technique should be used, and the variances were specified to be homogenous ($LF=0.080$; $sig>0.05$).

After this, Scheffe multiple comparison technique was used which is highly preferred for cases when the variances are homogenous. The reason for preferring Scheffe test was the test's being sensitive towards alpha type error. As a result of one-way variance analysis (ANOVA) performed to determine among which groups ARMS scores differed according to the variable of the reasons for unwillingness to read, a statistically significant difference ($p<0.05$) was determined in favor of the students who have limited time to read between the students who have limited time to read and who do not like reading, are lazy, have different priorities and who have no habit of reading at the end of post-hoc Scheffe test.

It was possible to mention that the students with high reading motivation considered having limited time as the most significant obstacle to reading. No statistically significant difference was found between other sub-dimensions ($p>0.05$).

DISCUSSION, CONCLUSION AND SUGGESTIONS

At the end of the research, it was revealed that the variables, gender, profession of father, economic status, frequency of buying newspapers, frequency of buying magazines, frequency of reading in electronic environment, and the reasons for unwillingness to read were efficient upon reading motivations of students whereas variables such as department, educational level of father, educational level of mother, and profession of mother were not efficient.

It was determined in this study investigating the reading motivations of the Faculty of Education students that the most significant reason of the students for unwillingness to read was having “limited time.” Moreover, reading motivations of the students who read in an electronic environment were found to be higher. This result proved that the young individuals in today’s information age spend more time in electronic environment. High reading motivation of the students who were subscribed to a magazine or newspaper supported the assumption that reading newspapers or magazines constantly positively affected reading motivation. High motivation level of the students with more monthly income and with self-employed fathers supported the assumption that socio-economic level affected the access to the reading instruments of today’s world, and financial possibilities were efficient upon obtaining these.

In recent years, some implementations (Türkiye Okuyor, 100 Temel Eser, Okuma Saati, etc.) related to develop reading skills and gaining reading habits have been fulfilled in Turkey. It was revealed in research results that these implementations have not met the expectations. Although so much attention has been paid, the reasons for reading motivations of students to decrease should be investigated further. In accordance with the results of this research, the suggestions below are offered for implementers and researchers:

The data of this study were collected from the students studying at the 1st grade of different departments in The Faculty of Education in Sinop, Turkey. The relationship between high school sub-structure of a student at the 1st grade and reading motivation should not be ignored. For that reason, methods and approaches preferred for orienting students towards reading especially at schools should be revised. More efficient approaches that do not put off students from reading should be adopted.

The research results indicated that reading motivations of the students who have permanently bought newspapers or magazines or who were subscribers were high. In this sense, classroom bookcases at schools should be enhanced more with reading materials.

It is an incontrovertible fact that the most significant role in making students to have reading habit is on families. For that reason, participation of families should not be ignored in implementations related to developing the reading habit for the students at school age. Furthermore, studies to be carried out on investigating the thoughts of families on reading should be supported. When the studies in the literature were reviewed, it was noticed that there were no several studies on role of the variables related to reading upon academic success. The studies on reading motivation should be carried out more in Turkey, and the factors affecting reading motivation positively or negatively should be analyzed for University students.

But according to Şahbaz (2012), reading attitudes of 8th grade students in primary education differ according to gender and this difference is on behalf of the female students and economic level of their family. The model developed and the relationships tested in this research can be re-discussed for different grades of faculties, for different socio-economic levels, and for different disadvantageous groups (students with reading disability, students with difference in native language, etc.).

In this sense, further studies can be carried out including new variables and excluding some others. In this study, the relationship of variables such as department, educational level of father, educational level of mother, and profession of mother with reading motivation was found to be insignificant. However, profession of father and economic status were among the factors affecting the reading motivation of the students. These findings could be reanalyzed through different models or analysis techniques. The relationship of fluent reading with academic success and exam success could be analyzed as independent from reading motivation and understanding.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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Appendix 1. The original version of adult reading motivation scale (ARMS) developed by Schutte and Malouff (2007)

Final version of the adult motivation for reading scale

Motivation for reading scale
The followings are the statements about reading. For each statement, please decide what is most true for you and write a number next to the statement using the following scale:

1 Strongly disagree nor disagree | 2 Disagree | 3 Neither agree | 4 Agree | 5 Strongly agree

Your rating	Item
	If a book or article is interesting, I don't care how hard it is to read
	Without reading, my life would not be the same
	My friends sometimes are surprised at how much I read
	My friends and I like to exchange books or articles we particularly enjoy
	It is very important for me to spend time reading
	In comparison to other activities, reading is important to me
	If I am going to need information from material I read, I finish the reading well in advance of when I must know the material
	Work performance or university grades are an indicator of the effectiveness of my reading
	I set a good model for others through reading
	I read rapidly
	Reading helps make my life meaningful
	It is important to me to get compliments for the knowledge I gather from reading
	I like others to question me on what I read so that I can show my knowledge
	I don't like reading technical material
	It is important to me to have others remark on how much I read
	I like hard, challenging books or articles
	I don't like reading material with difficult vocabulary
	I do all the expected reading for work or university courses
	I am confident I can understand difficult books or articles
	I am a good reader
	I read to improve my work or university performance

Note. Scale scores are calculated by summing items as follows: Overall reading motivation score, all items, with items 14 and 17 reverse recoded (divided by 21); Reading as Part of Self, items 2, 3, 4, 5, 6, 9, 10, and 11 (divided by 8); Reading Efficacy, items 1, 14, 16, 17, 19, and 20, with items 14 and 17 reverse recoded (divided by 6); Reading for Recognition, items 12, 13, and 15 (divided by 3); Reading to Do Well in Other Realms, items 7, 8, 18, and 21 (divided by 4).

Appendix 2. Adult reading motivation scale (ARMS) adapted into the Turkish by Yıldız et al. (2013)

Yetişkin Okuma Motivasyonu Ölçeği
Aşağıda okuma ile ilgili cümleler vardır. Her bir cümleyi okuyarak lütfen kendiniz için ne kadar doğru olduğuna karar verin ve aşağıdaki ölçekten bir numara seçerek cümlenin yanına yazın.

1	2	3	4	5
Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum

Maddeler	**Cevabınız**
Bir kitap veya makale ilgi çekiciyse, ne kadar zor okunduğu umurumda olmaz	
Okuma olmasaydı hayatım aynı olmazdı	
Bazen arkadaşlarım ne kadar çok okuduğuma şaşırırlar	
Arkadaşlarım ve ben, özellikle hoşumuza giden kitap ve makaleleri değiş tokuş etmekten zevk alırız	
Benim için okumaya vakit ayırmak önemlidir	
Diğer etkinliklerle kıyaslarsak, okuma benim için önemlidi	
Eğer okuduğum materyaldeki bilgiler bana daha sonra lazım olacaksa, bunların lazım olacağı zamandan çok önce okumayı bitiririm	
İş performansım veya üniversitede aldığım notlar, okuma etkililiğimin bir göstergesidir	
Okuyarak diğer insanlara iyi örnek olurum	
Hızlı okurum	
Okumak hayatımı daha anlamlı kılar	
Benim için okuduklarımdan edindiğim bilgiler hakkında övgü almak önemlidir	
Okuduklarım hakkında başkalarının bana soru sorması hoşuma gider çünkü bu sayede bilgimi gösterebilirim	
Benim için diğer insanların ne kadar çok okuduğum hakkında yorum yapması önemlidir	
Zor, düşündürücü kitap ve makaleleri severim	
İşim veya üniversitedeki derslerim için gerekli tüm okumaları tamamlarım	
Zor kitap ve makaleleri anlayabildiğimden eminim	
İyi bir okuyucuyumdur	
İş veya üniversite performansımı geliştirmek için okurum	

Açıklama: Ölçekte toplam 19 madde bulunmaktadır. 2, 3, 4, 5, 6, 9, 10 ve 11. maddeler (8 madde) *kendinin bir parçası olarak okuma (benlik);* 1, 15, 17, 18. maddeler (4 madde) *yeterlilik,* 12, 13, 14. maddeler (3 madde) *tanınma* ve 7, 8, 16 ve 19. maddeler (4 madde) *diğer alanlarda başarı için okuma (diğer)* faktörlerine aittir. İstatistiksel analizler ölçeğin orijinalinde olduğu gibi her faktörün ortalama puanları üzerinden yürütülmektedir. Ortalama puanlar, her faktöre ilişkin maddelerin toplanıp madde sayısına bölünmesiyle elde edilmektedir.

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